DEPARTMENT OF THE ARMY
Wilmington District, Corps of Engineers
Post Office Box 1890
Wilmington, North Carolina 28402-1890

Action ID No. 200331135 August 18, 2003

PUBLIC NOTICE

The **North Carolina Department of Transportation, ATTN: Dr. Gregory J. Thorpe, Director, Project Development and Environmental Analysis Branch, 1548 Mail Service Center, Raleigh, North Carolina 27699-1548** has applied for a Department of the Army (DA) permit **TO DISCHARGE DREDGED OR FILL MATERIAL INTO .21 ACRES OF WETLAND AND 1361 LINEAR FEET OF STREAM CHANNEL IN THE WATERS AND ADJACENT WETLANDS OF ISLAND CREEK, CUCUMBER CREEK, STONY RUN CREEK, BIG BEAR CREEK AND UNNAMED TRIBUTARIES IN ADDITION TO AN UNNAMED TRIBUTARY OF BIG MEADOW CREEK TO FACILITATE THE WIDENING OF APPROXIMATELY 9.4 MILES OF NC HIGHWAY 24/27 FROM SR 1142 (BROWNS HILL ROAD) TO SR 1253 (SAM ROAD) AT AND EAST OF LOCUST , STANLY COUNTY, NORTH CAROLINA (TIP NO. R-0967 CA & CB, STATE PROJECT NO. 6.689002T).**

The following description of the work is taken from data provided by the applicant and from observations made during an onsite visit by a representative of the Corps of Engineers. Plans submitted with the application show the proposed construction of a five-lane facility with curb and gutter through the Town of Locust to just east of Island Creek and a four-lane road with a 46-foot grassed median from Island Creek to the western city limits of Albemarle near the intersection with SR 1963 (Oakboro Road). The proposed right-of-way width for the project is 100 feet for the five-lane section and 200 feet for the four-lane divided section. The applicant has identified two sections of this project designated CA and CB. Section CA consists of the five-lane, curb and gutter facility and crosses an unnamed tributary to Big Meadow Creek, an unnamed tributary to Island Creek and Island Creek. A total of .05 acres of wetland and 499 linear feet of stream channel would be impacted by culvert extensions and channel relocation at the three stream crossings on Section CA. Streams are both intermittent and perennial. The existing double cell box culvert at Island Creek would be extended on both the upstream and downstream ends together with excavation to realign the channel affecting approximately 92 feet of channel (Site 5). Approximately 318 linear feet of the unnamed tributary to Big Meadow Creek would be relocated to the north of the roadway utilizing natural stream channel design (Site 1). A .05 acre herbaceous wetland vegetated with panic grass and smartweed would also be impacted at Site 1.

Section CB consists of the four-lane, median divided facility that crosses an unnamed tributary of Island Creek, Cucumber Creek, Stony Run Creek, Big Bear Creek and four unnamed tributaries. A total of .16 acres of wetland and 862 linear feet of stream channel would be impacted

by culvert replacement/extensions and channel realignments at six stream crossings on Section CB. Streams are both intermittent and perennial. Individual channel impacts range from 49 feet at Site11 on an unnamed tributary of Big Bear Creek to 321 feet at Site 9 on an unnamed tributary of Stony Run Creek. It is proposed to span Stony Run Creek and Big Bear Creek with bridges. A temporary work pad consisting of .02 acres of rock fill would be used on the west bank of Stony Run Creek to facilitate bridge construction (Site 12). Approximately .01 acres of herbaceous wetland vegetated with black needlerush would be impacted at Site 5 adjacent to an unnamed tributary to Stony Run Creek. A forested wetland measuring .15 acres and vegetated with black willow, red maple, green ash, blackberry and elderberry would be impacted at Site 11 adjacent to an unnamed tributary of Big Bear Creek.

The project as a whole would impact .21 acres of wetland, 899 linear feet of intermittent stream channel and 462 linear feet of perennial stream channel. Approximately 318 linear feet of intermittent channel on the CA Section would be relocated utilizing natural stream channel design. The applicant is proposing to mitigate for the remaining stream losses at a 2:1 ratio for perennial channels and at a 1:1 ratio for intermittent channels. Stream channel losses from the CB Section would be mitigated by contributing to the North Carolina Ecosystem Enhancement Program (EEP). Stream channel losses from the CA Section would be mitigated by utilization of the Back Creek Mitigation Site in northeastern Mecklenburg County which is currently under design. Wetland losses would not be mitigated according to the applicant's current proposal. The adequacy of this mitigation proposal will be evaluated for consistency with current mitigation policy and guidelines during this permit review. All proposed mitigation would occur in the Yadkin River Basin, Hydrologic Unit 03040105. A Federal Environmental Assessment (EA) for the proposed work was approved by the Federal Highway Administration (FHWA) on January 30, 1998. A Finding of No Significant Impact was signed by the FHWA on December 2, 1998. An Indirect and Cumulative Effects report was completed for this project on May 7, 2003. The purpose of the proposed work is to improve safety and traffic capacity of NC 24/27 and provide an improved transportation corridor between Charlotte and Albemarle. Plans showing the proposed work are included with this public notice.

The State of North Carolina will review this public notice do determine the need for the applicant to obtain any required State authorization. No Department of the Army (DA) permit will be issued until the coordinated State viewpoint on the proposal has been received and reviewed by this agency, nor will a DA permit be issued until the North Carolina Department of Environment and Natural Resources (NCDENR) has determined the applicability of a Water Quality Certificate as required by PL 92-500.

This application is being considered pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344). Any person may request, in writing within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearing shall state, with particularity, the reasons for holding a public hearing.

The District Engineer has consulted the latest published version of the National Register of Historic Places for the presence or absence of registered properties, or properties listed as being eligible for inclusion therein, and this worksite is not registered property or property listed as being

eligible for inclusion in the Register. Consultation of the National Register constitutes the extent of cultural resource investigations by the District Engineer, and he is otherwise unaware of the presence of such resources. Presently, unknown archeological, scientific, prehistorical, or historical data may be lost or destroyed by work under the requested permit.

The District Engineer, based on available information, is not aware that the proposed activity will affect species, or their critical habitat, designated as endangered or threatened pursuant to the Endangered Species Act of 1973. The last survey for the Federally endangered Schweinitz's sunflower was done in September 1996. The applicant states that the project area will be resurveyed for the presence of Schweinitz's sunflower during the fall 2003 flowering season.

The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest. Evaluation of the probable impacts which the proposed activity may have on the public interest requires a careful weighing of all those factors which become relevant in each particular case. The benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. The decision whether to authorize a proposal, and if so the conditions under which it will be allowed to occur, are therefore determined by the outcome of the general balancing process. That decision should reflect the national concern for both protection and utilization of important resources. All factors which may be relevant to the proposal must be considered including the cumulative effects thereof. Among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards and flood plain values (in accordance with Executive Order 11988), land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people. For activities involving the placement of dredged or fill materials in waters of the United States, a permit will be denied if the discharge that would be authorized by such permit would not comply with the Environmental Protection Agency's 404(b)(1) guidelines. Subject to the preceding sentence and any other applicable guidelines or criteria, a permit will be granted unless the District Engineer determines that it would be contrary to the public interest.

The Corps of Engineers is soliciting comments from the public; Federal, State and local agencies and officials; Indian Tribes and other interested parties in order to consider and evaluate the impacts, including secondary and cumulative impacts, of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment (EA) and/or an Environmental Impact Statement (EIS) pursuant to the National Environmental Policy Act (NEPA). Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

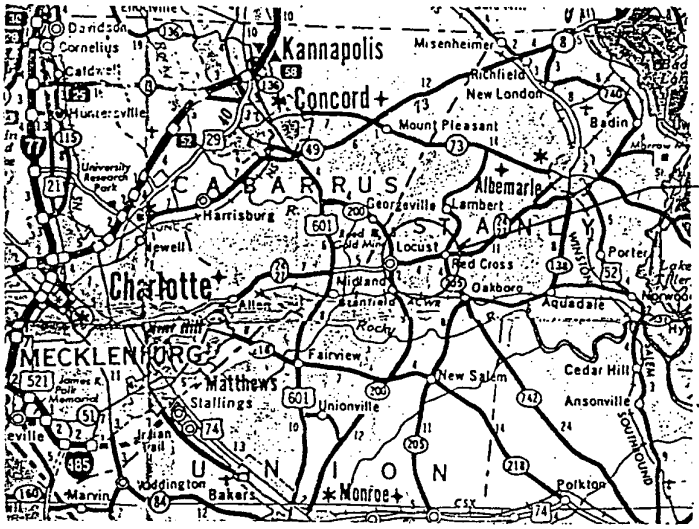
Generally, the decision whether to issue this Department of the Army (DA) permit will not be made until the North Carolina Division of Water Quality (NCDWQ) issues, denies, or waives State certification required by Section 401 of the Clean Water Act. The NCDWQ considers whether or not the proposed activity will comply with Sections 301, 302, 306 and 307 of the Clean Water Act. The application and this public notice for the DA permit serves as application to the NCDWQ for

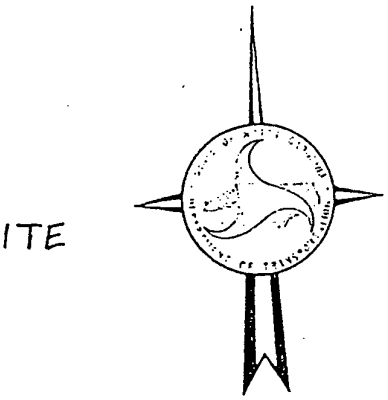
certification.

Additional information regarding the Clean Water Act certification may be reviewed at the offices of the 401 Wetlands Certification Unit, North Carolina Division of Water Quality (NCDWQ), 2321 Crabtree Blvd., Raleigh, North Carolina 27604. Copies of such materials will be furnished to any person requesting copies upon payment of reproduction costs.

All persons desiring to make comments regarding the application for Clean Water Act certification should do so in writing delivered to the North Carolina Division of Water Quality Wetlands Section, 1621 Mail Service Center, Raleigh, North Carolina 27626-0621, on or before September 10, 2003, Attention: Mr. John Dorney.

Written comments pertinent to the proposed work, as outlined above, will be received in this office, Attention: Mr. Steven Lund, until 4:15 p.m., September 17, 2003, or telephone (828) 271-7980.





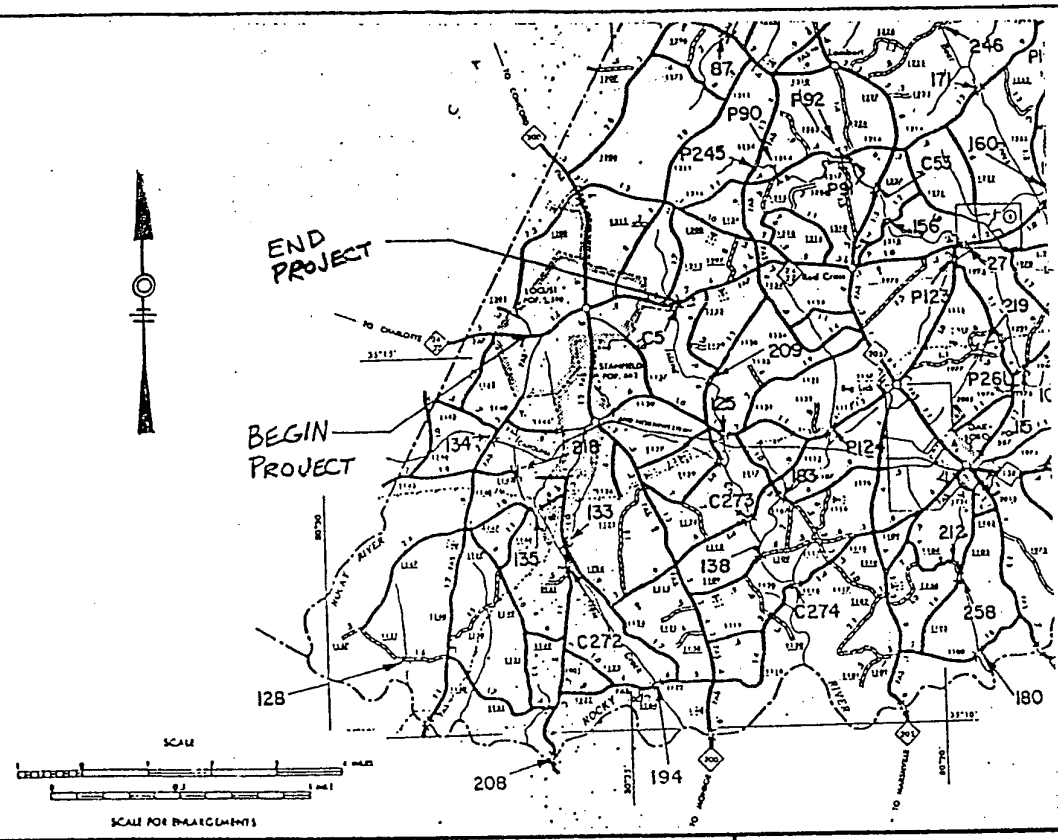
Scale of Miles

0 5 10 20 30

0 10 20 30 40 48

Scale of Kilometers

One inch equals approximately 13 miles and approximately 21 kilometers.



VICINITY MAPS

N.C. DEPT. OF TRANSPORTATION

DIVISION OF HIGHWAYS

STANLY COUNTY

PROJECT: 8.[illegible] [illegible]

WIDENING OF NC 24/27 WEST

SR-1142 TO EAST OF ISLAND CREEK

SHEET 1 OF 16 AUGUST 1999

LEGEND

WLB — WETLAND BOUNDARY

WETLAND

F F — DENOTES FILL IN WETLAND

S S — DENOTES FILL IN SURFACE WATER

P P — DENOTES FILL IN SURFACE WATER (POND)

T T — DENOTES TEMPORARY FILL IN WETLAND

E E — DENOTES EXCAVATION IN WETLAND

TS TS — DENOTES TEMPORARY FILL IN SURFACE WATER

DENOTES MECHANIZED CLEARING

FLOW DIRECTION

TB — TOP OF BANK

WE — EDGE OF WATER

C — PROP. LIMIT OF CUT

F — PROP. LIMIT OF FILL

PROP. RIGHT OF WAY

NG — NATURAL GROUND

PL — PROPERTY LINE

TOE — TEMP. DRAINAGE EASEMENT

PDE — PERMANENT DRAINAGE EASEMENT

EAB — EXIST. ENDANGERED ANIMAL BOUNDARY

EPB — EXIST. ENDANGERED PLANT BOUNDARY

WATER SURFACE

LIVE STAKES

BOULDER

COIR FIBER ROLLS

5 — ADJACENT PROPERTY OWNER OR PARCEL NUMBER

PROPOSED BRIDGE

PROPOSED BOX CULVERT

PROPOSED PIPE CULVERT

(DASHED LINES DENOTE EXISTNG STRUCTURES)

SINGLE TREE

WOODS LINE

DRAINAGE INLET

ROOTWAD

VANE

RIP RAP

RIP RAP ENERGY DISSIPATOR BASIN

BUFFER ZONE

BUFFER ZONE

NCDOT

DIVISION OF HIGHWAYS

STANLY COUNTY

PROJECT: 6.689002T (R-967CA)

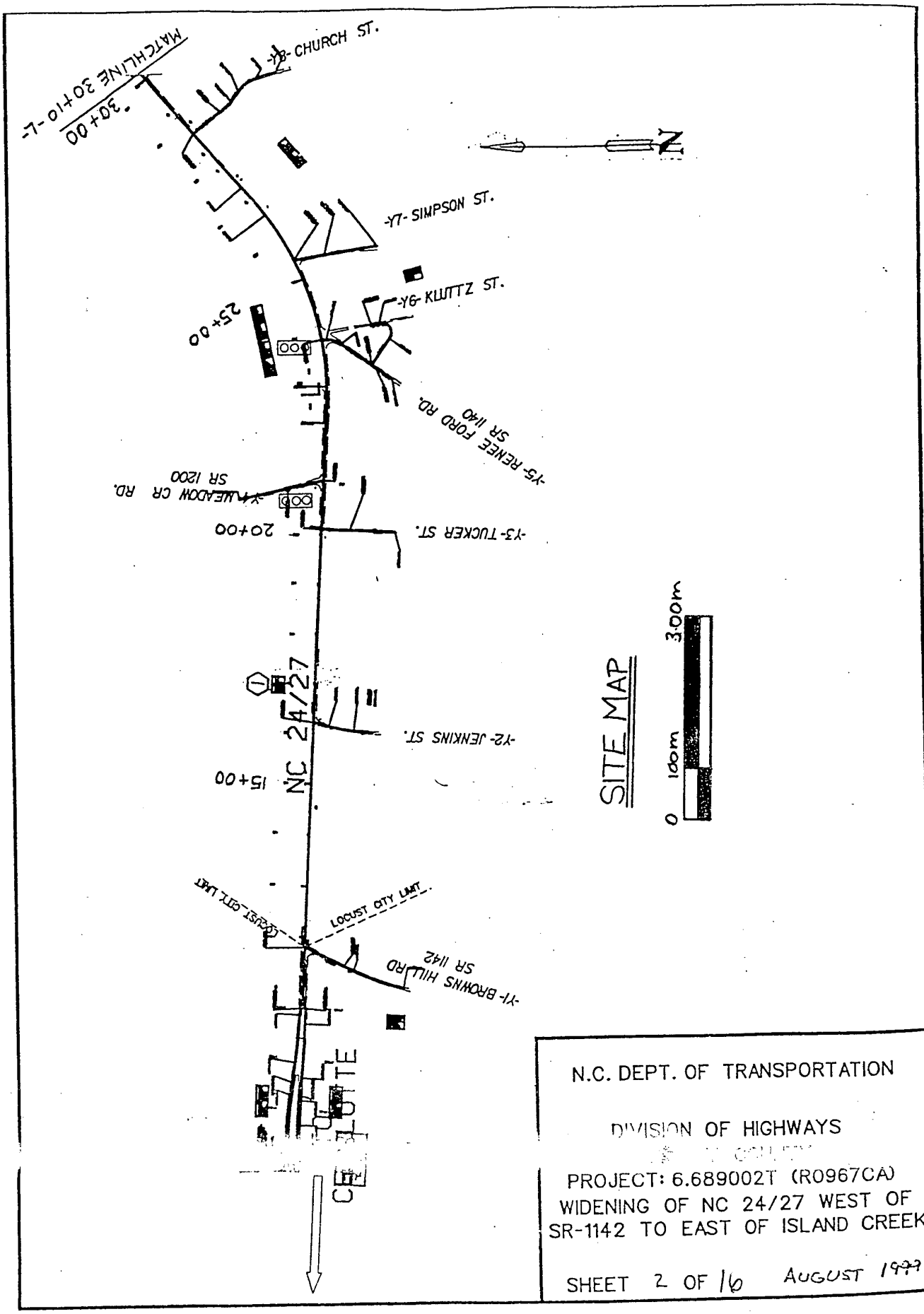
WIDENING OF NC 24/27

WEST OF SR 1142 TO EAST

OF ISLAND CREEK

SHEET 1A OF 16

4/15/03

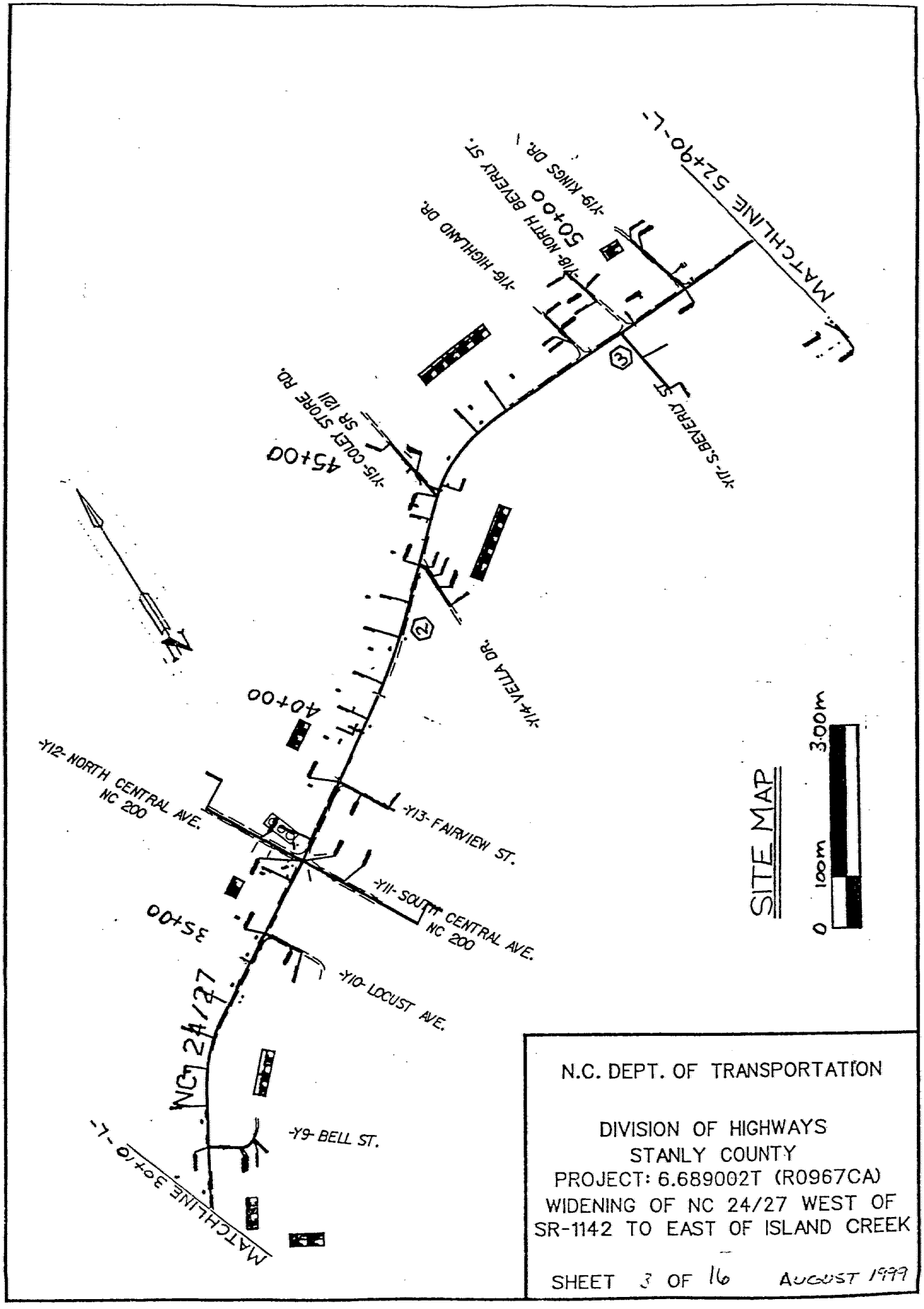


N.C. DEPT. OF TRANSPORTATION

DIVISION OF HIGHWAYS

PROJECT: 6.689002T (R0967CA)
WIDENING OF NC 24/27 WEST OF
SR-1142 TO EAST OF ISLAND CREEK

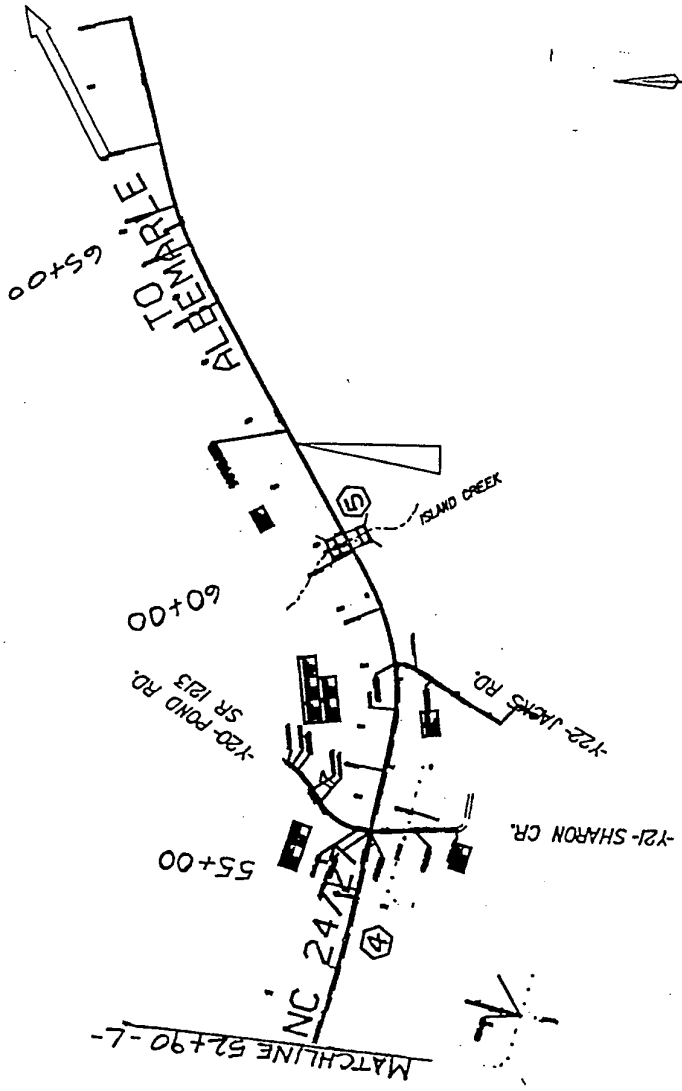
SHEET 2 OF 16 AUGUST 1977



N.C. DEPT. OF TRANSPORTATION

DIVISION OF HIGHWAYS
STANLY COUNTY
PROJECT: 6.689002T (R0967CA)
WIDENING OF NC 24/27 WEST OF
SR-1142 TO EAST OF ISLAND CREEK

SHEET 3 OF 16 AUGUST 1999



SITE MAP

0 100m 300m

N.C. DEPT. OF TRANSPORTATION

DIVISION OF HIGHWAYS

STANLY COUNTY

PROJECT [illegible]

WIDENING OF NC 24/27 WEST OF SR-1142 TO EAST OF ISLAND CREEK

SHEET 4 OF 16 AUGUST 1977

Natural Channel Design Summary
Unnamed Tributary to Meadow Creek
TIP No. R-0967 CA
State Project No. 6.689002T
Stanley County, North Carolina

Prepared by Barbara H. Mulkey Engineering, Inc. **March 2003**

This natural channel design summary is presented to the North Carolina Department of Transportation (NCDOT) as part of on-site compensatory mitigation for the proposed upgrade of NC 24/27 in Stanley County. The widening of NC 24/27 extends from west of SR 1142 near the Cabarrus and Stanley County line through the Town of Locust to east of Island Creek and SR 1213. An unnamed tributary (UT) to Meadow Creek, situated immediately west of Locust, will be relocated northward from its existing location outside of the proposed fill limits. The UT has been identified as a perennial stream and is part of the Yadkin/Pee Dee River Subbasin 03-07-12 (USGS Hydrologic Unit 03040105). A morphological table, complete with existing channel, reference reach, and proposed reach characteristics is attached. In addition, proposed design and detail sheets are also included with this summary. The project is within the Piedmont physiographic province.

The headwaters associated with the UT to Meadow Creek originate immediately west of Locust, near the project area. The UT flows in a northwesterly direction approximately 1.5 mi (2.9 km) before converging with Meadow Creek, then another 1.5 mi (2.9 km) to the southeast to unite with the Rocky River. The drainage area at the project site is approximately 0.08 sq. mi (0.2 sq. km). It is considered rural and relatively undisturbed, aside from the road fill associated with NC 24/27. The proposed project will require the stream to be relocated due to existing fill slope design requirements. Overall stream length will be reduced and slope will be increased in order to correctly align the new channel with its modified valley type.

Existing Channel

A 400-foot (121.9-meter) section of the single thread natural channel associated with the UT to Meadow Creek was surveyed during December 2002. This section was located near Sta. 17+00 near the western terminus of the proposed project area. The surveyed reach exhibited channel characteristics similar to a G4 stream type, as noted by the Rosgen Classification of Natural Rivers. The G4 stream type exhibits low to moderate sinuosities, moderate channel gradients, and low channel width/depth ratios. This stream type is very unstable due to the very high sediment supply available from both upslope and channel derived sources. Its pools are often filling with bedload, as the potential for sediment storage is high. No natural pools were observed during the existing channel surveys. Bank erosion and bedload transport rates are typically high and the ratio of bedload to total sediment load often exceeds 50%. These stream types are very sensitive to disturbance and tend to make significant adverse channel adjustments to changes in flow regime and sediment supply from the watershed (Rosgen and Silvey, 1998). Several headcuts were noted along the surveyed reach, with the largest at stream station 2+18. This headcut dropped approximately 4 ft (1.2 m). The UT exhibited a bankfull cross sectional area of 3.67 sq. ft (0.34 sq. m), an average slope of 0.0406, and a D50 of 9.0 mm. A detailed summary of existing channel conditions is presented in attached morphological table.

Reference Reach
Due to the existing, unstable condition of the UT, a stable stream (UT Varnals Creek) outside of the project area was selected as the reference reach. This channel was selected based on its watershed components, stream type, and other general characteristics. The reference reach channel is situated in Alamance County and classifies as a B4a. It exhibits a drainage area of 0.24 sq. mi (0.62 sq. km) and a bankfull cross sectional area of 7.9 sq. ft. Based on surveys, the channel is stable and exhibits very low bank height ratios. Its valley characteristics are very comparable with the existing channel. Little to no bank erosion was noted during the survey. A detailed summary of reference conditions are also presented in the attached morphological table.

Proposed Channel
The proposed channel was based on dimensionless ratios derived from the reference reach survey and data interpretation. The bankfull width will be increased from 4.6 ft (1.4 m) to 7.5 ft (2.3 m) and the bankfull mean depth will be reduced from 0.79 ft (0.24 m) to 0.5 ft (0.15 m). As a result, the width/depth ratio will increase to approximately 15 from the existing 5.8 ratio. A decrease in both the bankfull mean velocity and bankfull discharge is anticipated. The design stream will exhibit additional floodprone area; however, meander lengths will be reduced to better reflect reference reach pattern characteristics. The radius of curvatures will average approximately 16.0 ft (4.9 m), an increase of approximately 3.0 ft (0.9 m). Slopes will be slightly increased due to the loss of overall stream length; however, energy will be dissipated via step/pool morphology characteristic with the B stream type. Rock cross vanes will be the primary method influencing the step/pool morphology. These cross vanes will be established throughout the channel in riffle sections and used to provide grade control, center the thalweg, and protect the stream banks on both sides of the new channel until vegetation is established. The cross vanes will also decrease shear stresses throughout the reach. The riparian zone adjacent to the channel will be planted with native vegetation conducive to wetter, floodplain areas.

Proposed channel stabilization characteristics are presented on the attached detail sheet. It is anticipated that the riparian zone will be planted with native trees and shrubs above bankfull depth and herbaceous species within the channel.

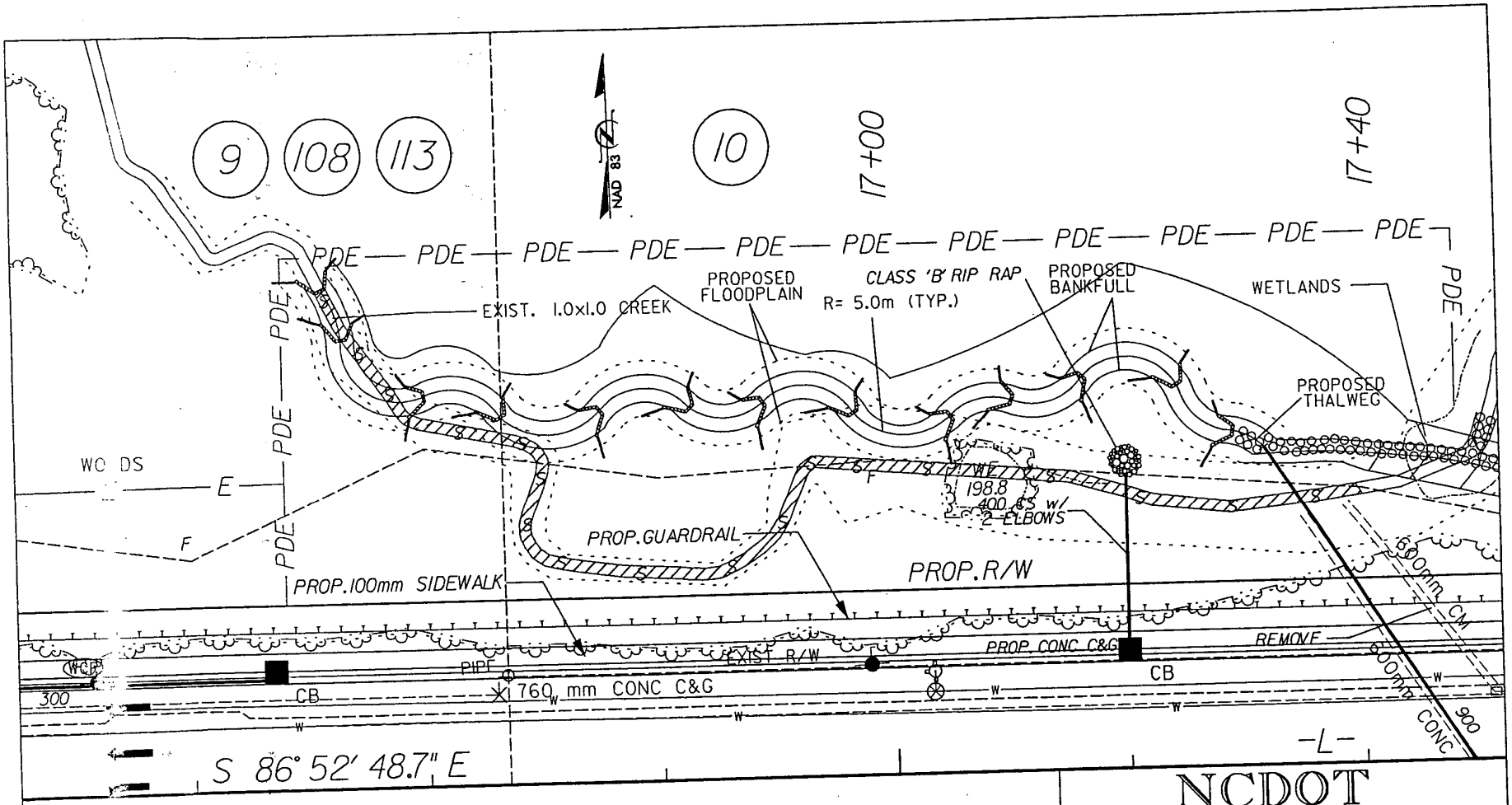
Sediment Transport
Based on pebble counts and bar samples taken along the existing channel, the D50 averages 9.0 mm and the D84 averages approximately 34.0 mm. The existing channel exhibits a critical shear stress of 1.50 lbs/ft^2 which may entrain up to a 150 mm particle. Based on the design, the proposed channel will exhibit a critical shear stress of 1.26 lbs/ft^2 entraining up to a 100 mm particle. This reduction in entrainment will further reduce degradation. In addition, cross vanes will be installed throughout the riffle sections to further reduce the possibility of additional channel degradation.

References
North Carolina Department of Environment and Natural Resources (NCDENR), 1998. Yadkin/Pee Dee Basinwide Water Quality Management Plan.

Rosgen, D. and L. Silvey, 1998. Field Guide for Stream Classification. Wildland Hydrology, Inc.

Appendix B Morphological Measurement Table

Variables	Existing Channel	Proposed Reach	USGS Station	Reference Reach
1. Stream type	G4	B4a		B4/1a
2. Drainage area	0.08 sq. mi.	0.08 sq. mi.		0.24 sq. mi.
3. Bankfull width	4.6 ft.	7.5 ft.		9.7 ft.
4. Bankfull mean depth	0.79 ft.	0.5 ft.		0.8 ft.
5. Width/depth ratio	5.8	15.0		12.7
6. Bankfull cross-sectional area	3.67 sq. ft	3.75 sq. ft.		7.9 sq. ft.
7. Bankfull mean velocity	5.50 fps	5.38 fps		5.23 fps
8. Bankfull discharge, cfs	20.2 cfs	20.2 cfs		41.33 cfs
9. Bankfull max depth	1.09 ft.	0.69 ft.		1.1 ft.
10. Width of floodprone area	9.1 ft.	14 ft.		26.2 ft.
11. Entrenchment ratio	2.0	1.9		2.7
12. Meander length	70.0 ft	45.0 ft.		59.0 ft.
13. Ratio of meander length to bankfull width	15.2	6.0		6.0
14. Radius of curvature	13.0 ft	16.0 ft.		13.4 ft.
15. Ratio of radius of curvature to bankfull width	2.8	2.1		1.4
16. Belt width	50.0 ft.	30.0 ft.		15.0 ft.
17. Meander width ratio	10.9	4		1.5
18. Sinuosity (stream length/valley length)	1.16	1.15		1.2
19. Valley slope	0.0518 ft./ft.	0.0537 ft./ft.		0.0458 ft./ft.
20. Average slope	0.0406 ft./ft.	0.0458 ft./ft.		0.0405 ft./ft.
21. Pool slope	0.0062 ft./ft.	0.005 ft./ft.		0.0047 ft./ft.
22. Ratio of pool slope to average slope	0.15	0.10		0.1
23. Maximum pool depth	1.41 ft.	2.0 ft.		1.6 ft.
24. Ratio of pool depth to average bankfull depth	1.78	4.0		1.9
25. Pool width	15.0 ft.	9.0 ft.		12.0 ft.
26. Ratio of pool width to bankfull width	3.26	1.2		1.2
27. Pool to pool spacing	Not Available	22.8 ft.		34.5 ft.
28. Ratio of pool to pool spacing to bankfull width	Not Available	3.0		6.3



PLAN VIEW
STREAM
IMPACTS
SITE 1
SCALE = 1:500

NCDOT

DIVISION OF HIGHWAYS

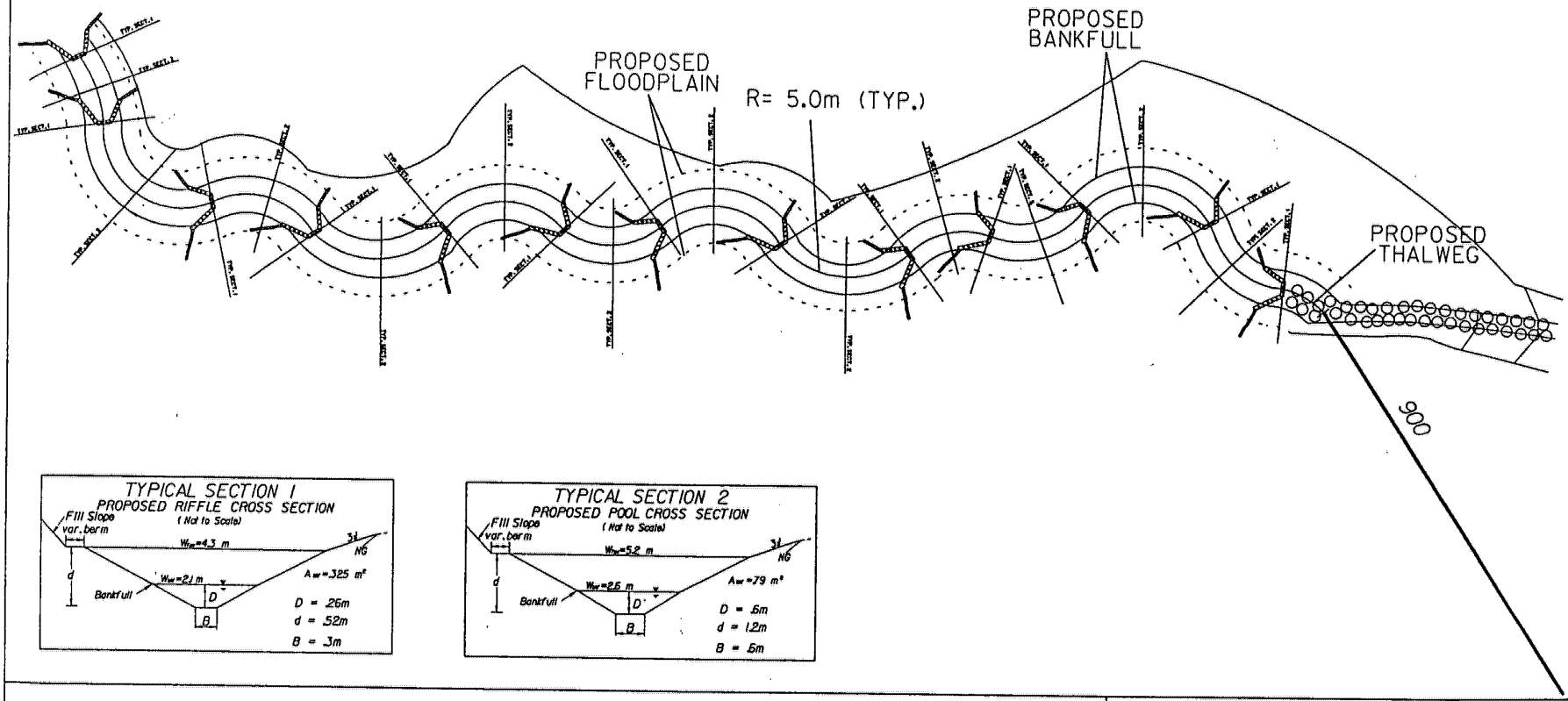
STANLY COUNTY

PROJECT: 6.689002T (R-967CA)

WIDENING OF NC 24/27

WEST OF SR 1142 TO EAST OF ISLAND CREEK

SHEET 8 OF 16 5/03



PLAN VIEW
STREAM
RESTORATION
SITE 1

NOT TO SCALE

NCDOT

DIVISION OF HIGHWAYS

STANLY COUNTY

PROJECT: 6.689002T (R-967CA)

WIDENING OF NC 24/27

WEST OF SR 1142 TO EAST

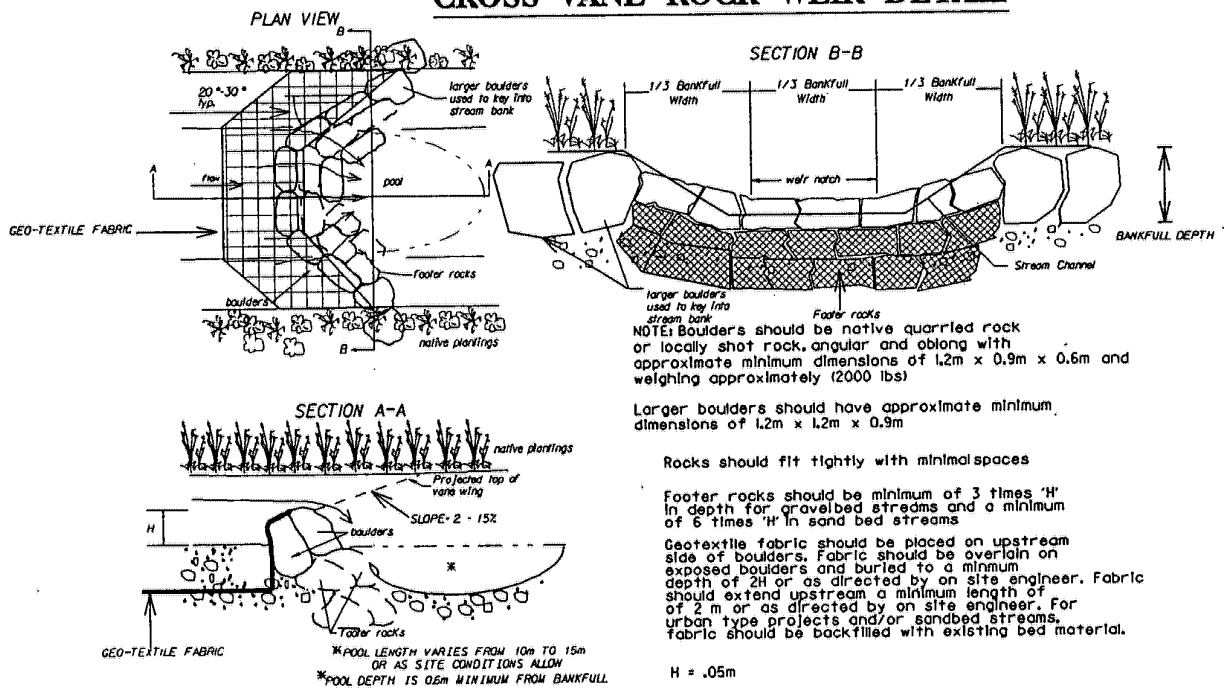
OF ISLAND CREEK

SHEET 9 OF 16 5/03

TIP NO. R-9167 CR, STANLEY COUNTY
UNNAMED TRIB. TO ROCKY RIVER

LONGITUDINAL PROFILE

CROSS VANE ROCK WEIR DETAIL



NOTE: Boulders should be native quarried rock or locally shot rock, angular and oblong with approximate minimum dimensions of 1.2m x 0.9m x 0.6m and weighing approximately (2000 lbs)

Larger boulders should have approximate minimum dimensions of 1.2m x 1.2m x 0.9m

Rocks should fit tightly with minimal spaces

Footer rocks should be minimum of 3 times 'H' in depth for gravelbed streams and a minimum of 6 times 'H' in sand bed streams

Geotextile fabric should be placed on upstream side of boulders. Fabric should be overlain on exposed boulders and buried to a minimum depth of 2H or as directed by on site engineer. Fabric should extend upstream a minimum length of of 2 m or as directed by on site engineer. For urban type projects and/or sandbed streams, fabric should be backfilled with existing bed material.

H = .05m

CROSSVANE DETAIL

NOT TO SCALE

NCDOT

DIVISION OF HIGHWAYS

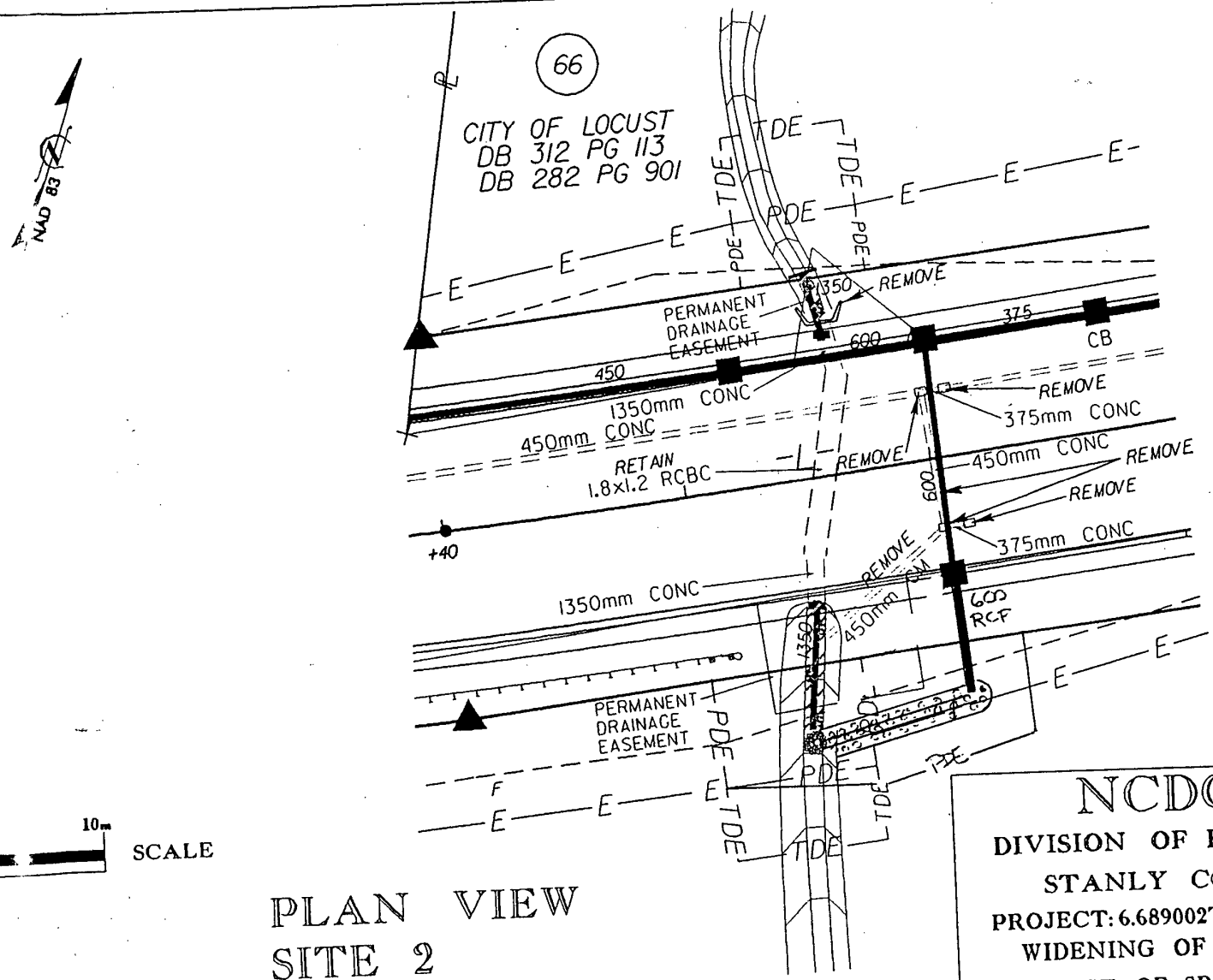
STANLY COUNTY

PROJECT: 6.689002T (R-967CA)

WIDENING OF NC 24/27

WEST OF SR 1142 TO EAST OF ISLAND CREEK

SHEET 10 OF 16 5/03



PLAN VIEW
SITE 2

NCDOT

DIVISION OF HIGHWAYS

STANLY COUNTY

PROJECT: 6.689002T (R-0967CA)

WIDENING OF NC 24/27

WEST OF SR 1142 TO

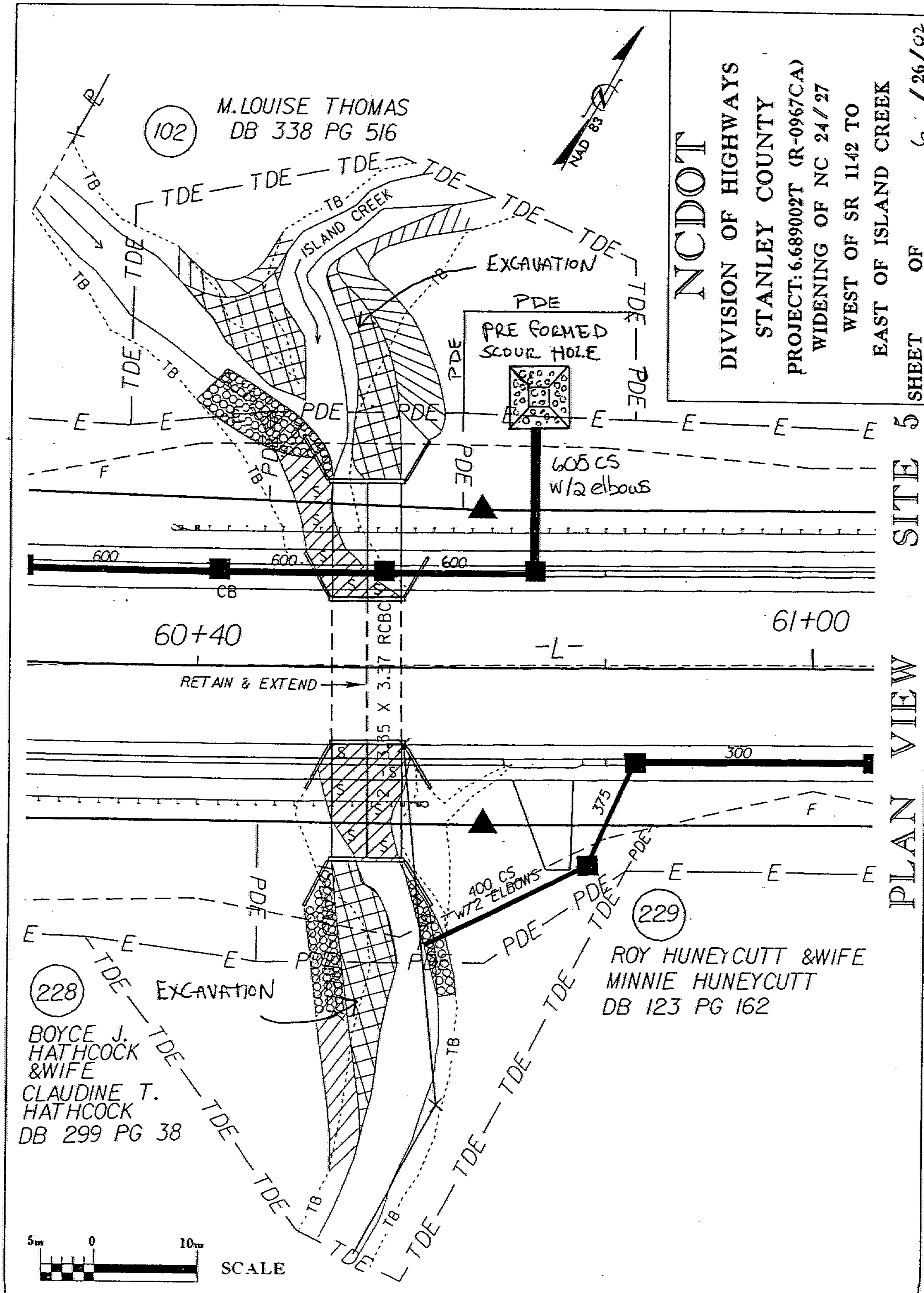
EAST OF ISLAND CREEK

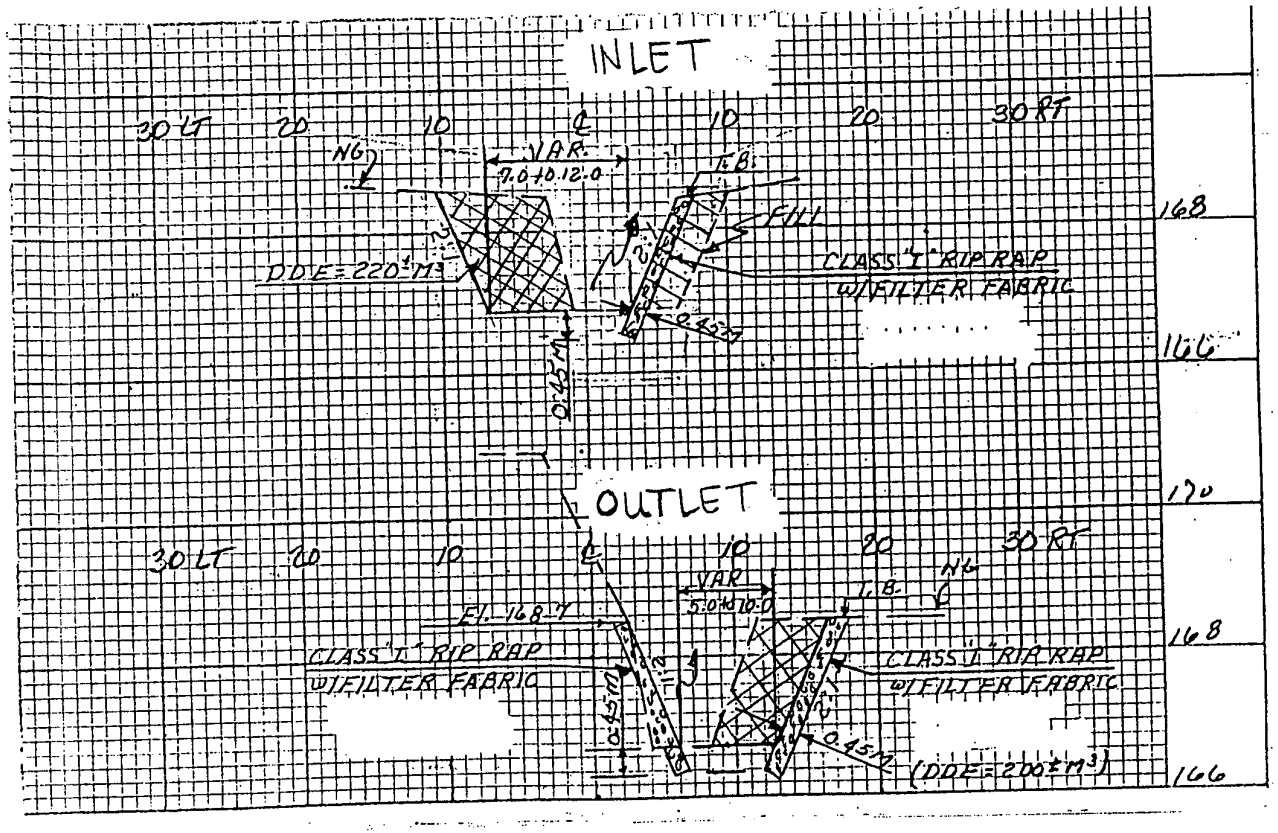
SHEET 12 OF 16 6/27/02

NCDOT

DIVISION OF HIGHWAYS
STANLEY COUNTY
PROJECT: 6.689002T (R-0967CA)
WIDENING OF NC 24/27
WEST OF SR 1142 TO
EAST OF ISLAND CREEK
SHEET OF 6/26/02

PLAN VIEW SITE 5





TYPICAL CROSS-SECTION FOR SITE 5

NCDOT

DIVISION OF HIGHWAYS

STANLY COUNTY

PROJECT: 6.689002T (R-0967CA)

WIDENING OF NC 24/27

WEST OF SR 1142 TO

EAST OF ISLAND CREEK

SHEET 14 OF 16 11/27/01

PROPERTY OWNERS

NAMES AND ADDRESSES

SITE NO.	PARCEL NO.	OWNER	ADDRESSES
1	10	Judy & John Godwin	1404 W. Main Street Locust, NC 28097
1	9	Mary A. Roye	1508 W. Main Street Locust, NC 28097
1	108	Melvin E. Love	1507 W. Main Street Locust, NC 28097
1	113	Lydia S. Dotson	1419 W. Main Street Locust, NC 28097
2	66	City Of Locust	PO Box 190 Locust, NC 28097
2	199	Locust Lumber Co., Inc.	PO Box 130 Locust, NC 28097
3	79	Vicki McCall	PO Box 562 Locust, NC 28097
3	210	McCoy Feed Seed Co., Inc.	13735 Broadway Ave. Midland, NC 28107
4	215	Glen R. Smith	3019 Tuckahoe Street Arlington, VA 22213
5	102	M. Louise Thomas	735 Pine Valley Rd. Winston Salem, NC 27106
5	228	Boyce J. Hatcock	PO Box 194 Locust, NC 28097

NCDOT

DIVISION OF HIGHWAYS

STANLY COUNTY

PROJECT: 6.689002T (R-967CA)

WIDENING OF NC 24/27

WEST OF SR 1142 TO EAST

OF ISLAND CREEK

SHEET 15 OF 16 5/03

SUMMARY

Site No.	Station (From/To)	Structure Size	WETLAND IMPACTS: Fill In Wetlands (ha)	Temp. Fill In Wetlands (ha)	Excavation In Wetlands (ha)	Interchange Isolated Wetland (ha)	Mechanized Clearing (Method III) (ha)	SURFACE WATER IMPACTS: Fill In SW (Natural) (ha)	Fill In SW (Pond) (ha)	Channel Lost (m)	Relocated Channel (m)	Enclosed Channel (m)
1	16+5[illegible] to 17+55 -L- lt.	none	0	0	<.01	0	<.01	0.011	0	110	97	0
2	42[illegible]0 -L- lt. & rt.	1.8x1.2 RCBC w/ 1350 RCP	0	0	0	0	0	<.01	0	14	0	14
			0	0	0	0	0		0		0	
			0	0	0	0	0		0		0	
5	60+[illegible] TO -L- lt. & rt.	2@3.35x3.37 RCBC	0	0	0	0	0	0.015	0	28	0	22
TOTALS:					<.01		<.01	0.026	0	152	~~0~~ 97	~~22~~ 36

All sites [illegible]e above headwaters.

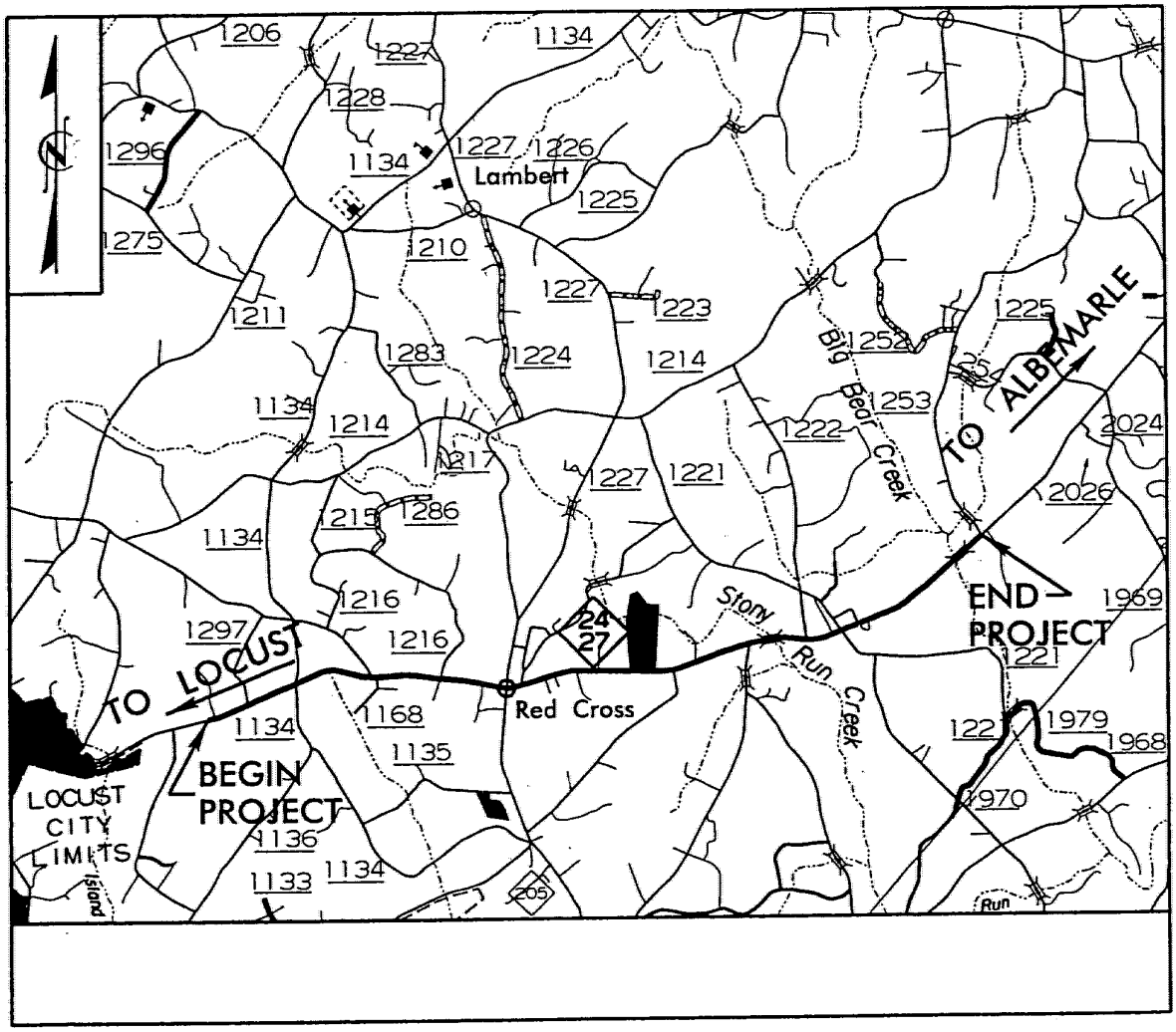
* original site 3 & 4 not jurisdictional

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

STANLY COUNTY
PROJECT: 6.689002T R967CA

SHEET 16 OF 16 May, 2003

VICINITY MAP



N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

STANLY COUNTY

PROJECT: 6.689002T (R-967CB)
NC 24-27 FROM EAST OF ISLAND CREEK IN LOCUST TO EAST OF BIG BEAR CREEK NEAR SR 1253 (SAM ROAD)

SHEET 1 OF 21 9-27-00

LEGEND

Symbol	Description
WLB	WETLAND BOUNDARY
WLB / WLB	WETLAND
F F	DENOTES FILL IN WETLAND
S S	DENOTES FILL IN SURFACE WATER
P P	DENOTES FILL IN SURFACE WATER (POND)
T T	DENOTES TEMPORARY FILL IN WETLAND
E E	DENOTES EXCAVATION IN WETLAND
TS TS	DENOTES TEMPORARY FILL IN SURFACE WATER
	DENOTES MECHANIZED CLEARING
	FLOW DIRECTION
TB	TOP OF BANK
WE	EDGE OF WATER
C	PROP. LIMIT OF CUT
F	PROP. LIMIT OF FILL
	PROP. RIGHT OF WAY
NG	NATURAL GROUND
PL	PROPERTY LINE
TDE	TEMP. DRAINAGE EASEMENT
PDE	PERMANENT DRAINAGE EASEMENT
EAB	EXIST. ENDANGERED ANIMAL BOUNDARY
EPB	EXIST. ENDANGERED PLANT BOUNDARY
▽	WATER SURFACE

Symbol	Description
X X X X X	LIVE STAKES
	BOULDER
	COIR FIBER ROLLS
5	ADJACENT PROPERTY OWNER OR PARCEL NUMBER
	PROPOSED BRIDGE
	PROPOSED BOX CULVERT
	PROPOSED PIPE CULVERT
	(DASHED LINES DENOTE EXISTNG STRUCTURES)
	SINGLE TREE
	WOODS LINE
	DRAINAGE INLET
	ROOTWAD
	VANE
	RIP RAP
	RIP RAP ENERGY DISSIPATOR BASIN
BUFFER ZONE	BUFFER ZONE

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

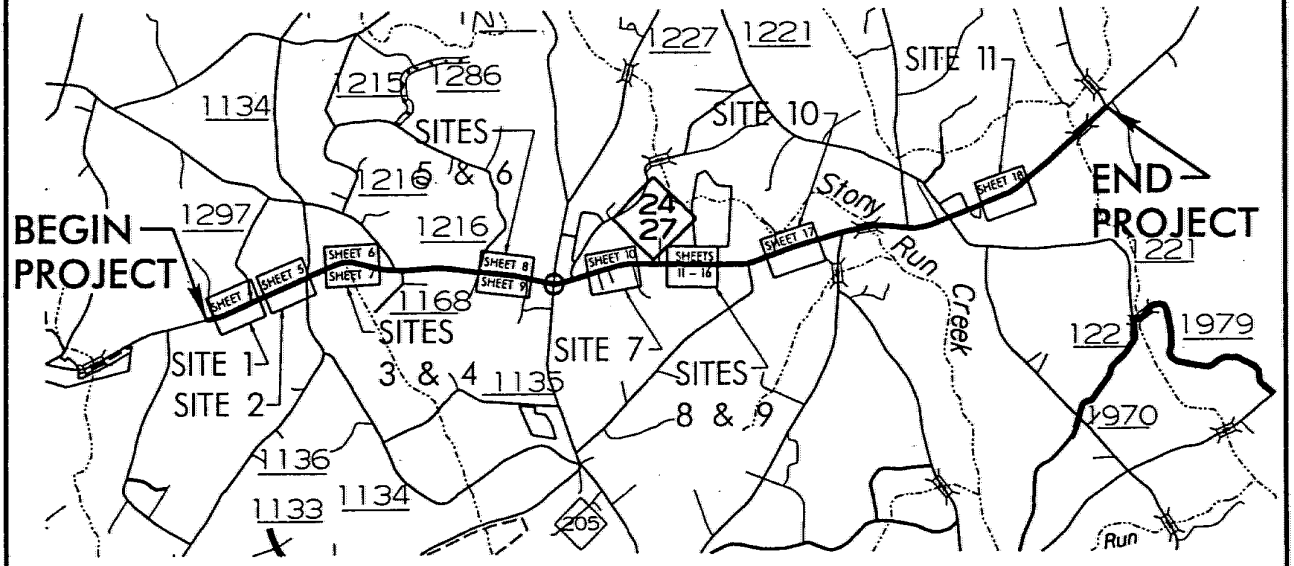
STANLY COUNTY

PROJECT: [illegible]

NC 24-27 FROM EAST OF ISLAND CREEK IN LOCUST TO EAST OF BIG BEAR CREEK NEAR SR 1253 (SAM ROAD)

SHEET 2 OF 21 9-27-00

SITE MAP

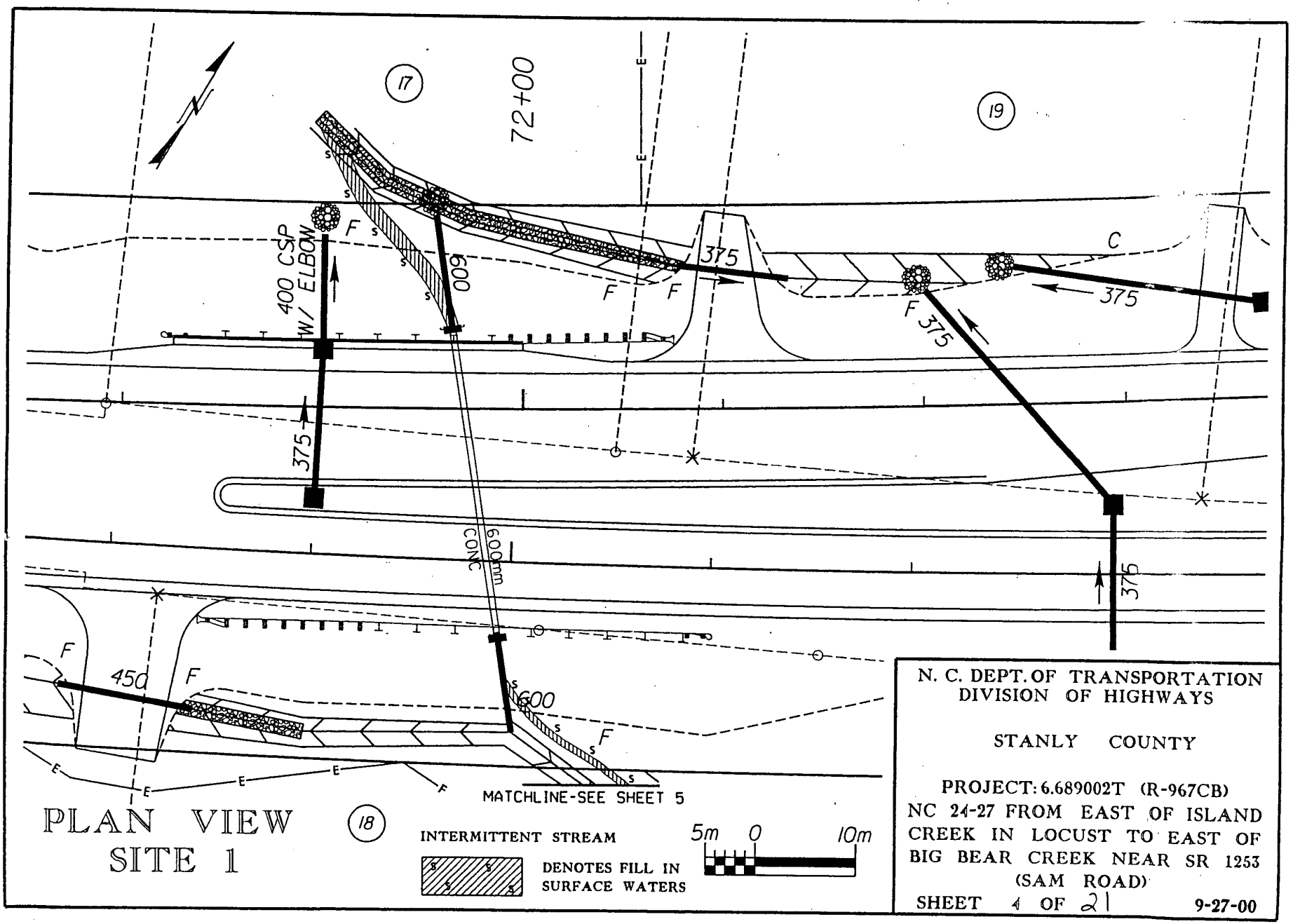


N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

STANLY COUNTY

PROJECT: 6.689002T (R-967CB)
NC 24-27 FROM EAST OF ISLAND CREEK IN LOCUST TO EAST OF BIG BEAR CREEK NEAR SR 1253 (SAM ROAD)

SHEET 3 OF 21 9-27-00



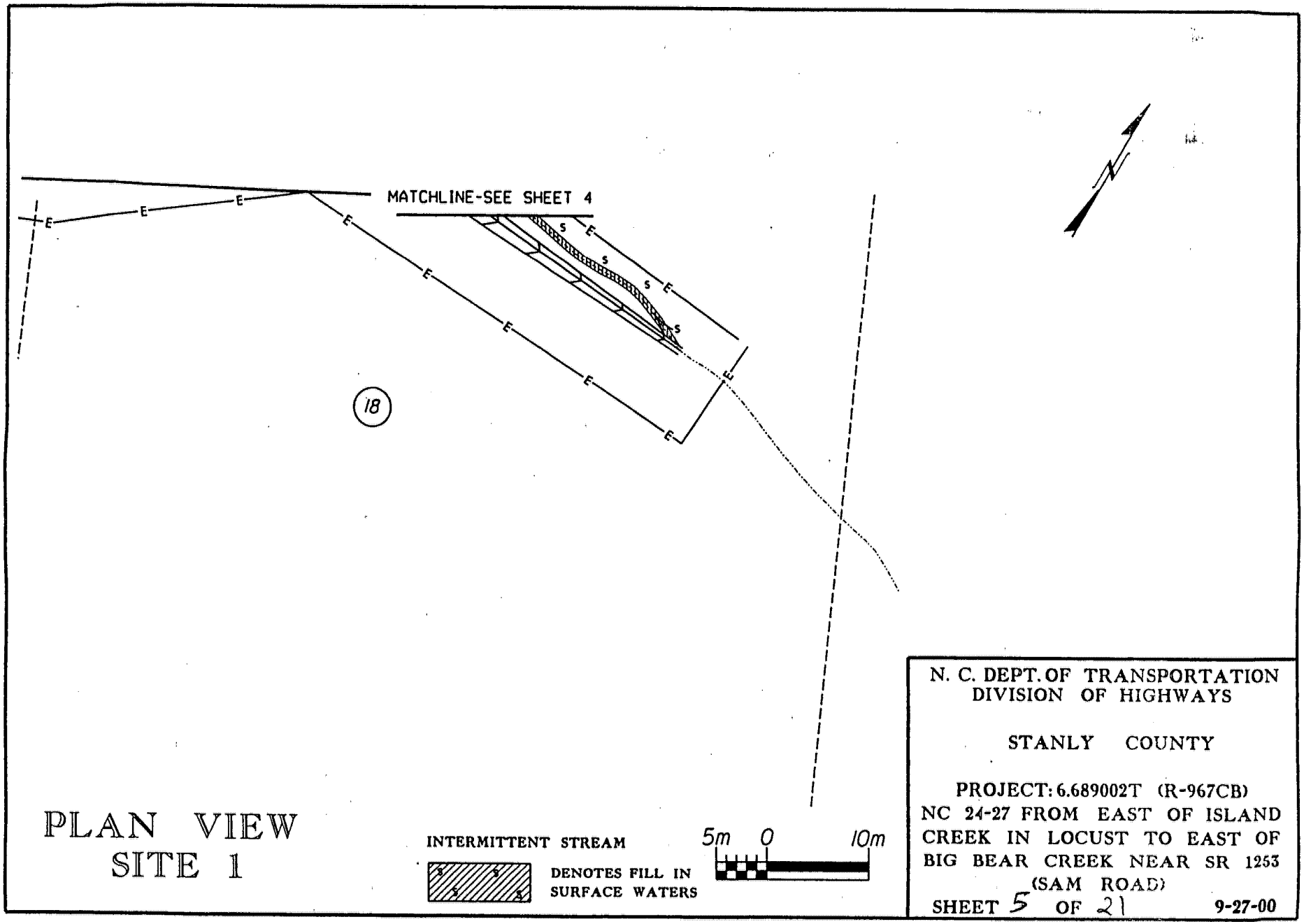
PLAN VIEW
SITE 1

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

STANLY COUNTY

PROJECT: 6.689002T (R-967CB)
NC 24-27 FROM EAST OF ISLAND CREEK IN LOCUST TO EAST OF BIG BEAR CREEK NEAR SR 1253 (SAM ROAD)

SHEET 4 OF 21 9-27-00



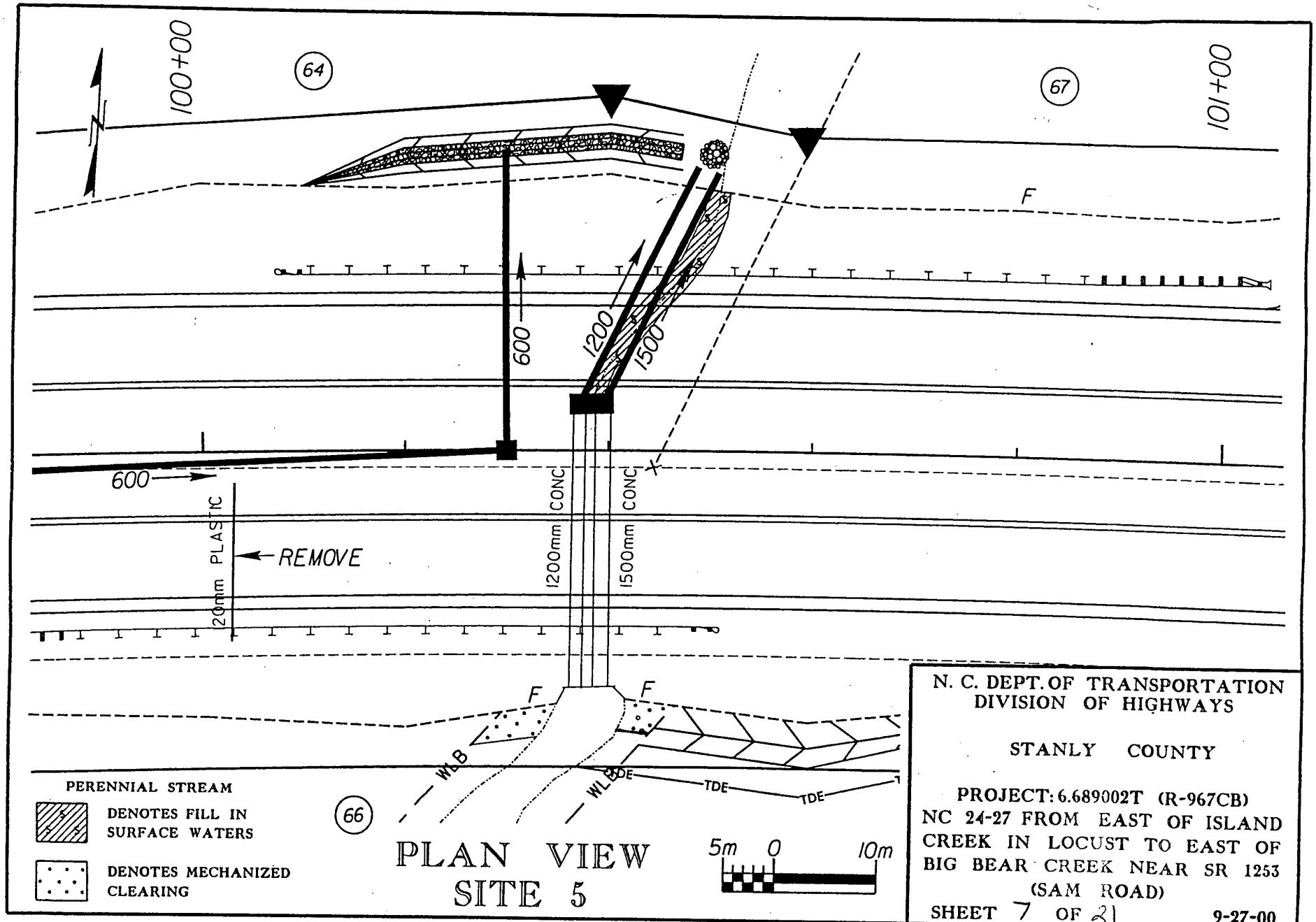
PLAN VIEW
SITE 1

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

STANLY COUNTY

PROJECT: 6.689002T (R-967CB)
NC 24-27 FROM EAST OF ISLAND CREEK IN LOCUST TO EAST OF BIG BEAR CREEK NEAR SR 1253 (SAM ROAD)

SHEET 5 OF 21 9-27-00



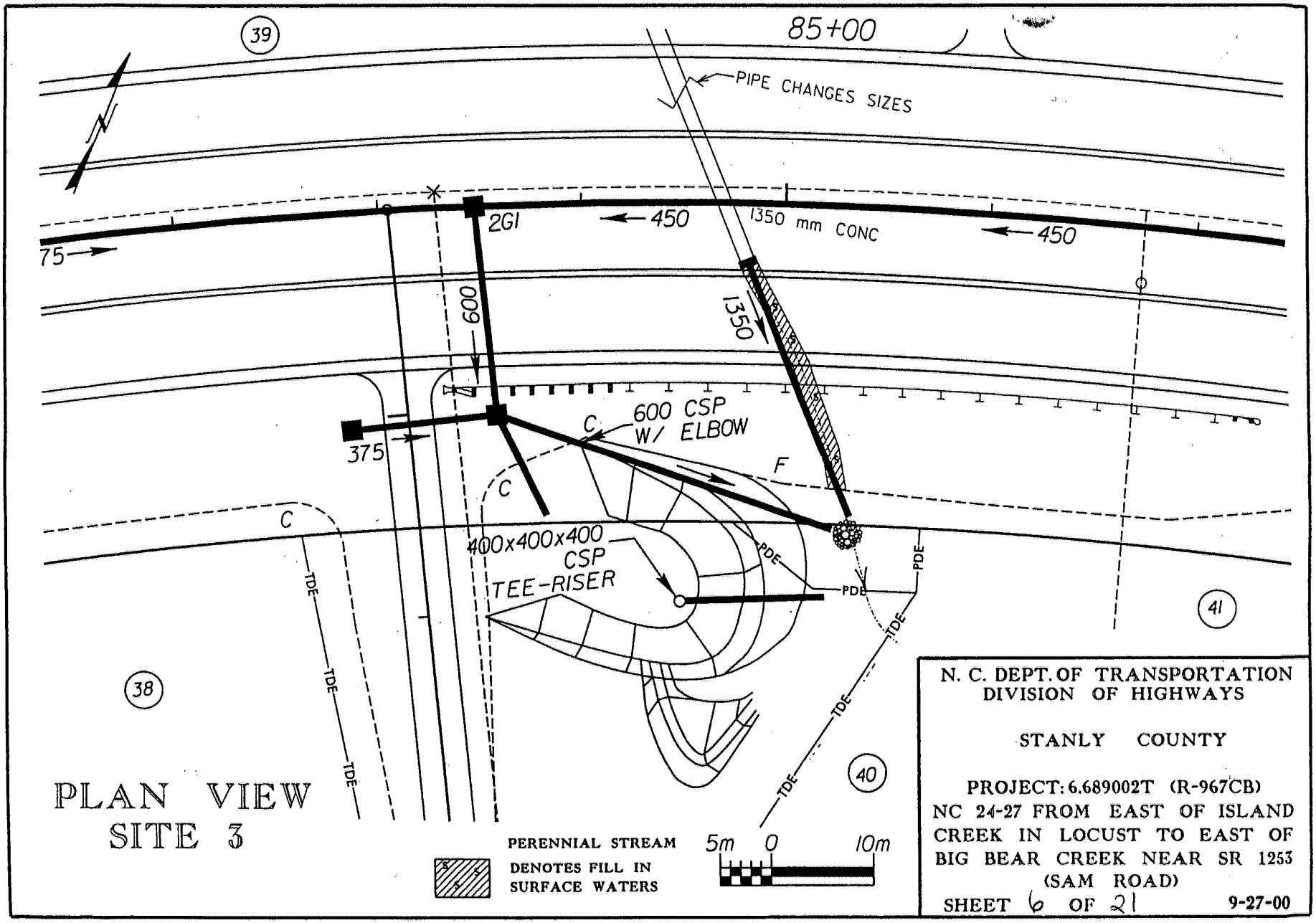
PLAN VIEW
SITE 5

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

STANLY COUNTY

PROJECT: 6.689002T (R-967CB)
NC 24-27 FROM EAST OF ISLAND CREEK IN LOCUST TO EAST OF BIG BEAR CREEK NEAR SR 1253 (SAM ROAD)

SHEET 7 OF 21 9-27-00

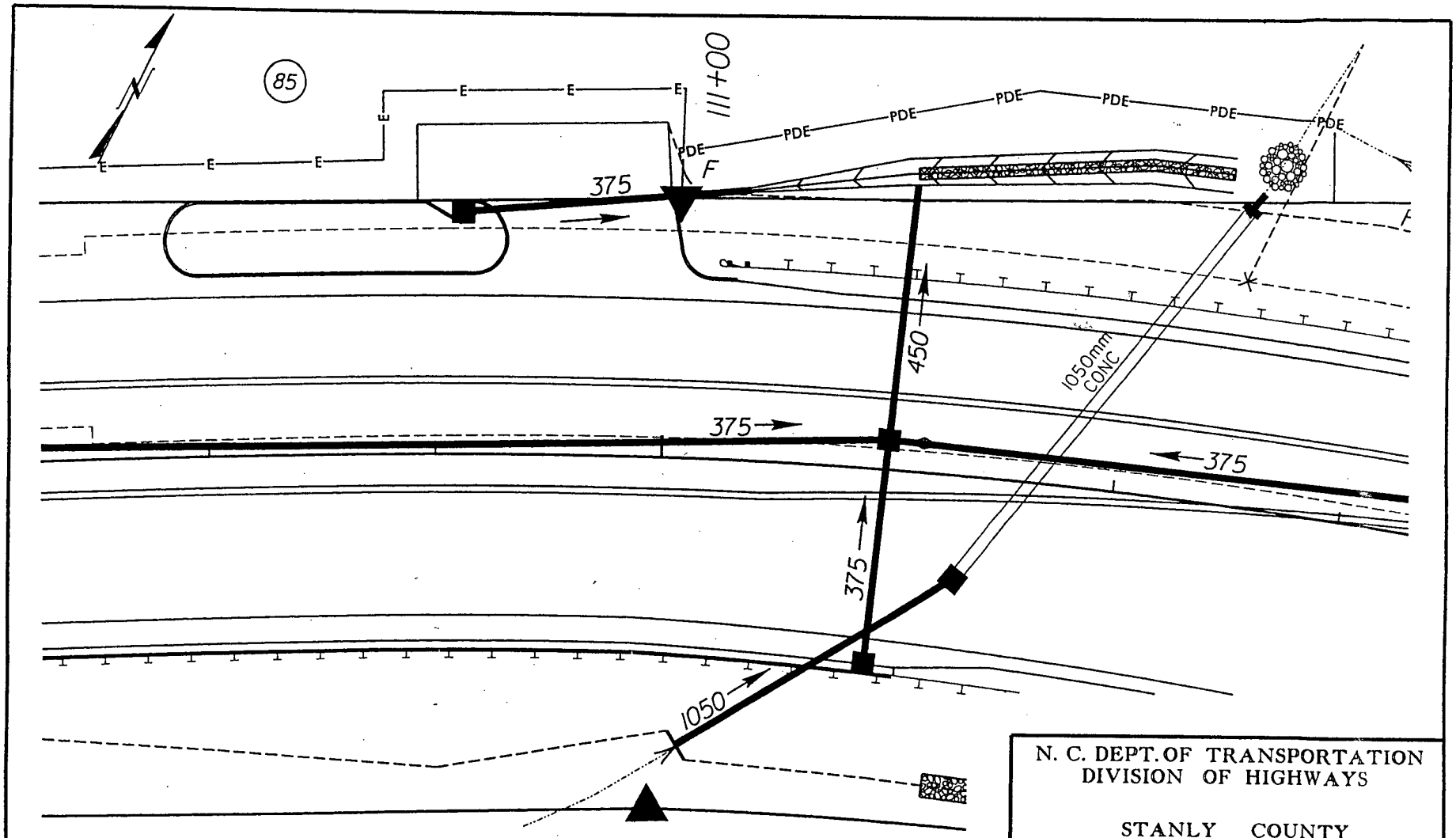


N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

STANLY COUNTY

PROJECT: 6.689002T (R-967CB)
NC 24-27 FROM EAST OF ISLAND CREEK IN LOCUST TO EAST OF BIG BEAR CREEK NEAR SR 1253 (SAM ROAD)

SHEET 6 OF 21 9-27-00



PLAN VIEW
SITE 7

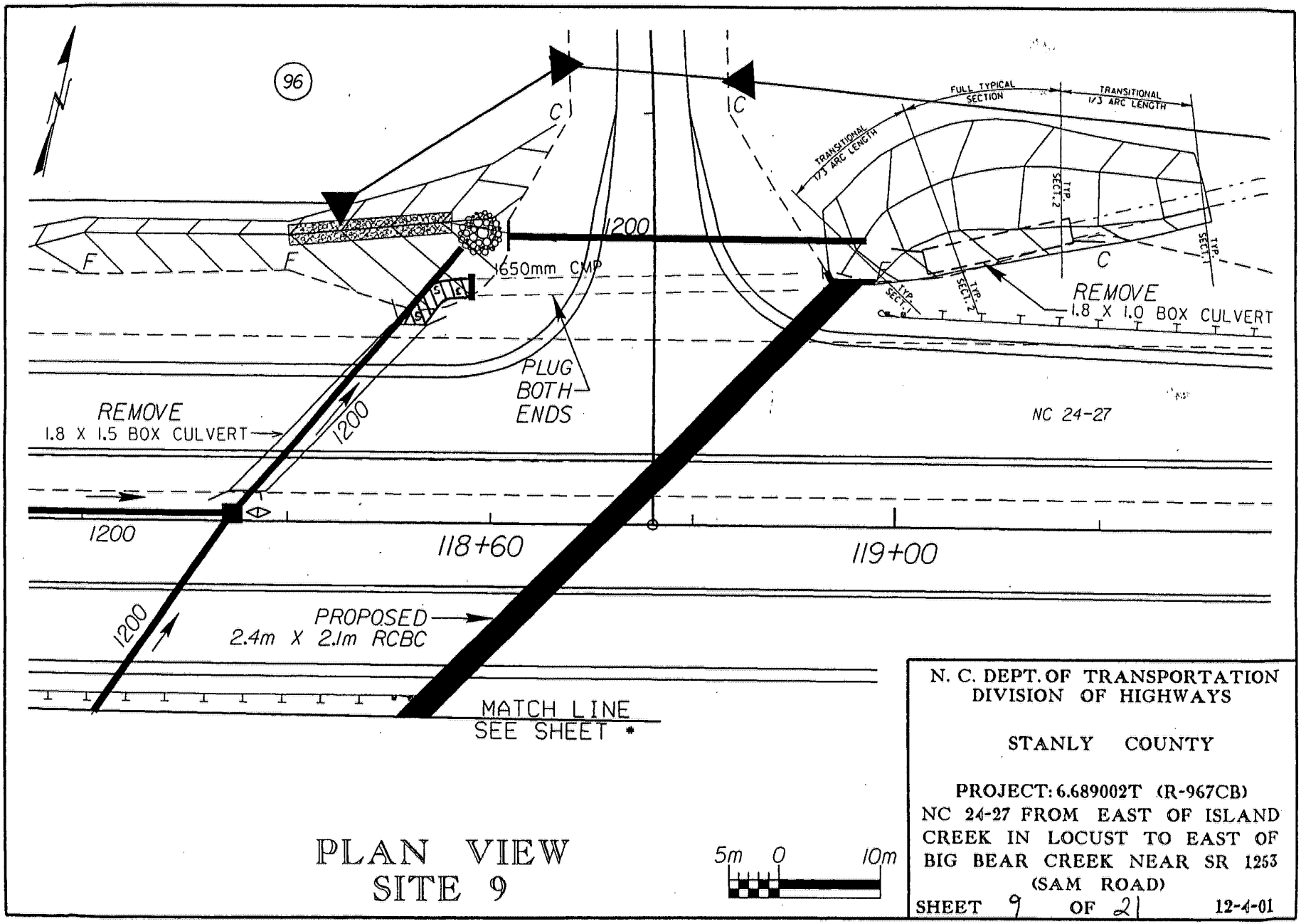
INTERMITTENT STREAM / STORMWATER CHANNEL

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

STANLY COUNTY

PROJECT: 6.689002T (R-967CB)
NC 24-27 FROM EAST OF ISLAND CREEK IN LOCUST TO EAST OF BIG BEAR CREEK NEAR SR 1253 (SAM ROAD)

SHEET 8 OF 21 9-27-00



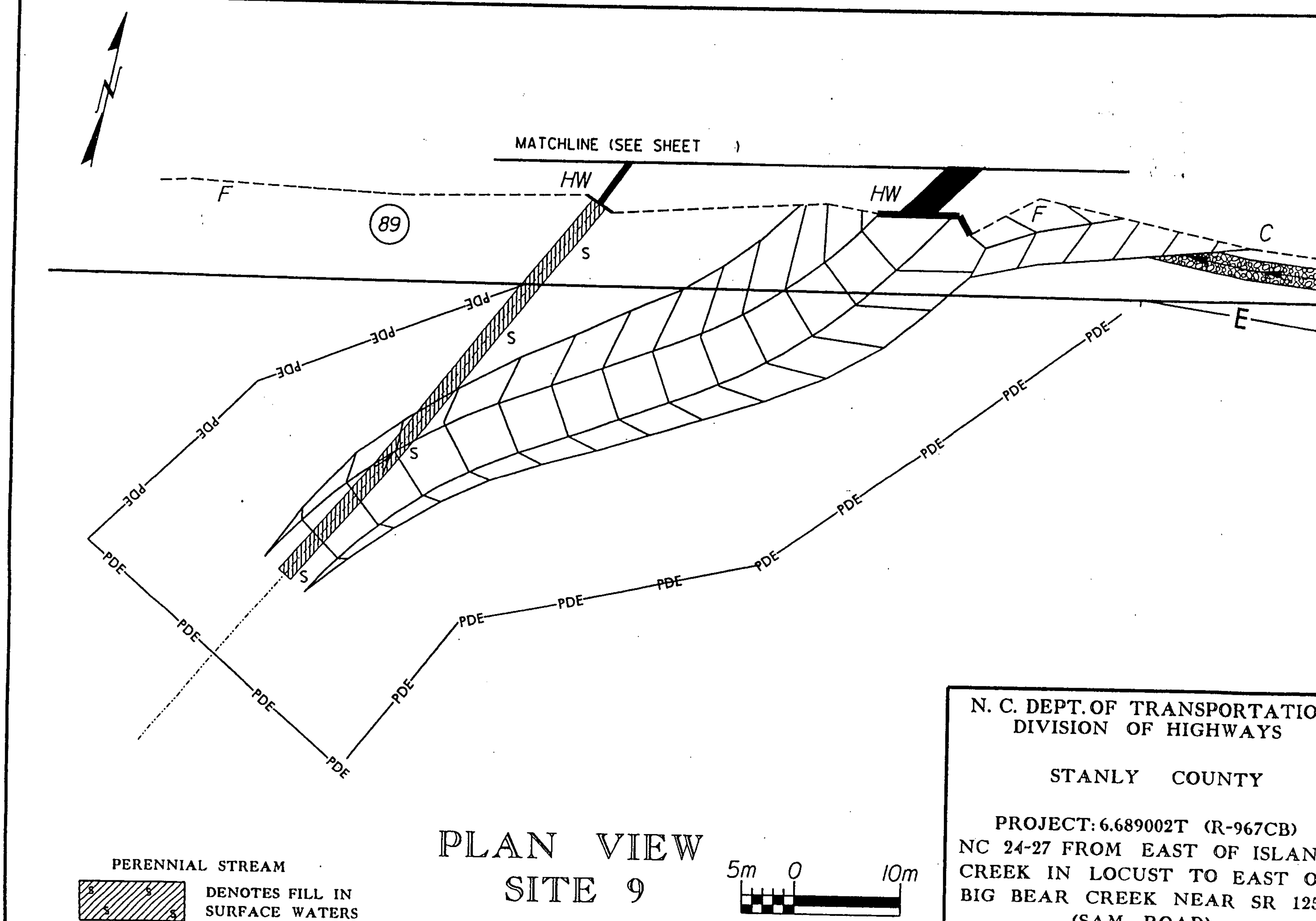
PLAN VIEW
SITE 9

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

STANLY COUNTY

PROJECT: 6.689002T (R-967CB)
NC 24-27 FROM EAST OF ISLAND CREEK IN LOCUST TO EAST OF BIG BEAR CREEK NEAR SR 1253 (SAM ROAD)

SHEET 9 OF 21 12-4-01



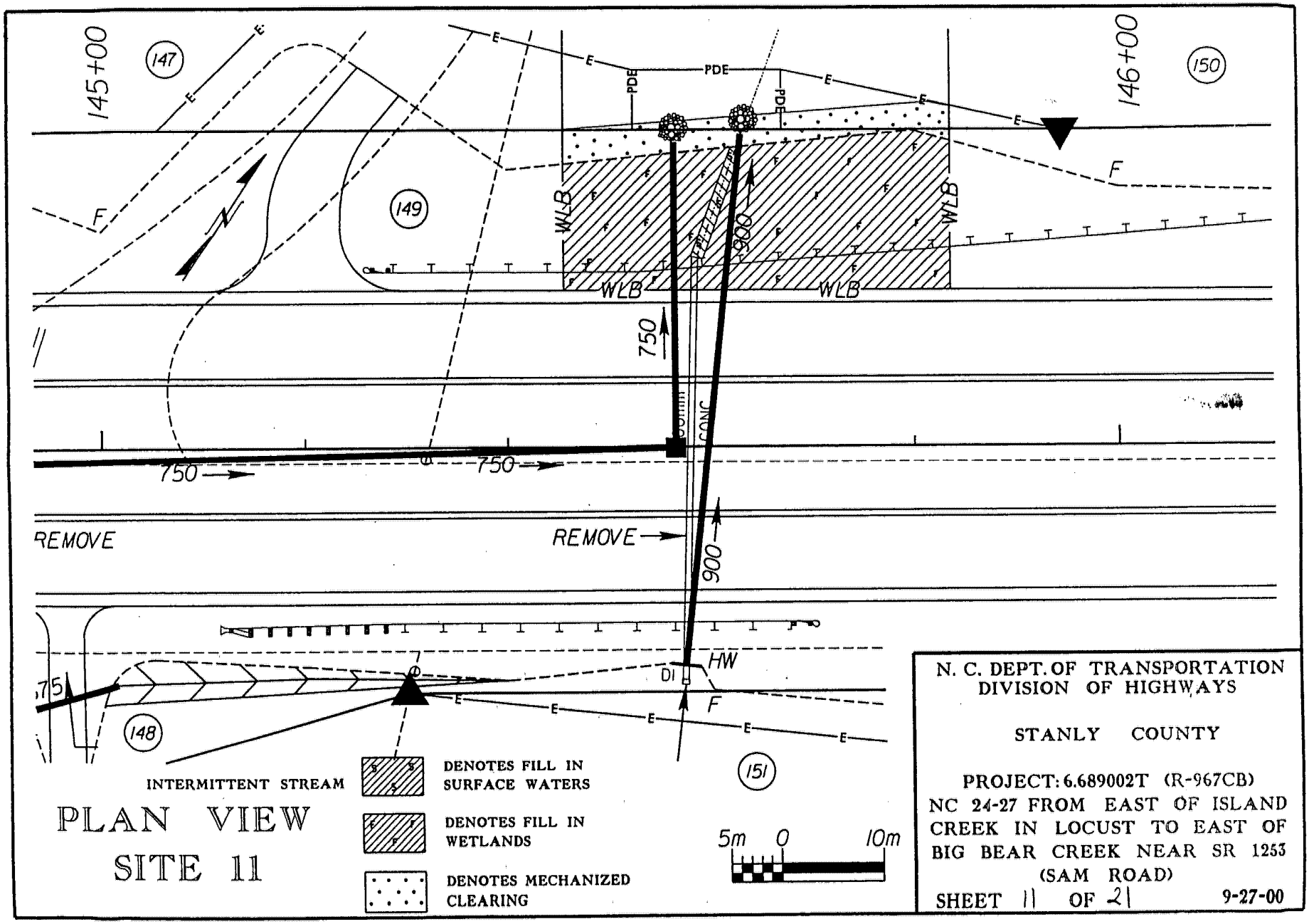
PLAN VIEW
SITE 9

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

STANLY COUNTY

PROJECT: 6.689002T (R-967CB)
NC 24-27 FROM EAST OF ISLAND CREEK IN LOCUST TO EAST OF BIG BEAR CREEK NEAR SR 1253 (SAM ROAD)

SHEET 10 OF 21 9-27-00



PLAN VIEW
SITE 11

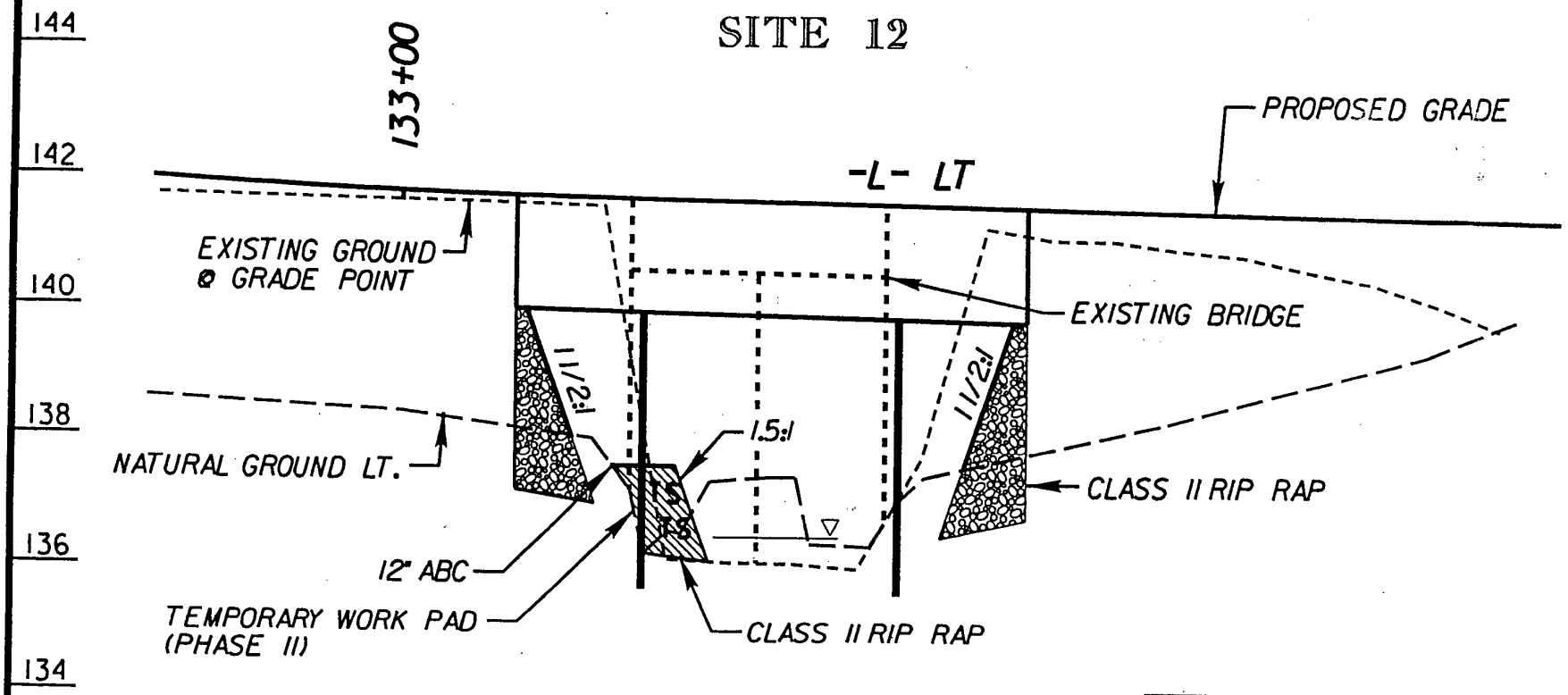
N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

STANLY COUNTY

PROJECT: 6.689002T (R-967CB)
NC 24-27 FROM EAST OF ISLAND CREEK IN LOCUST TO EAST OF BIG BEAR CREEK NEAR SR 1253 (SAM ROAD)

SHEET 11 OF 21 9-27-00

PROFILE VIEW
SITE 12



TS TS DENOTES TEMPORARY FILL IN SURFACE WATER

5m 0 10m HORIZONTAL SCALE

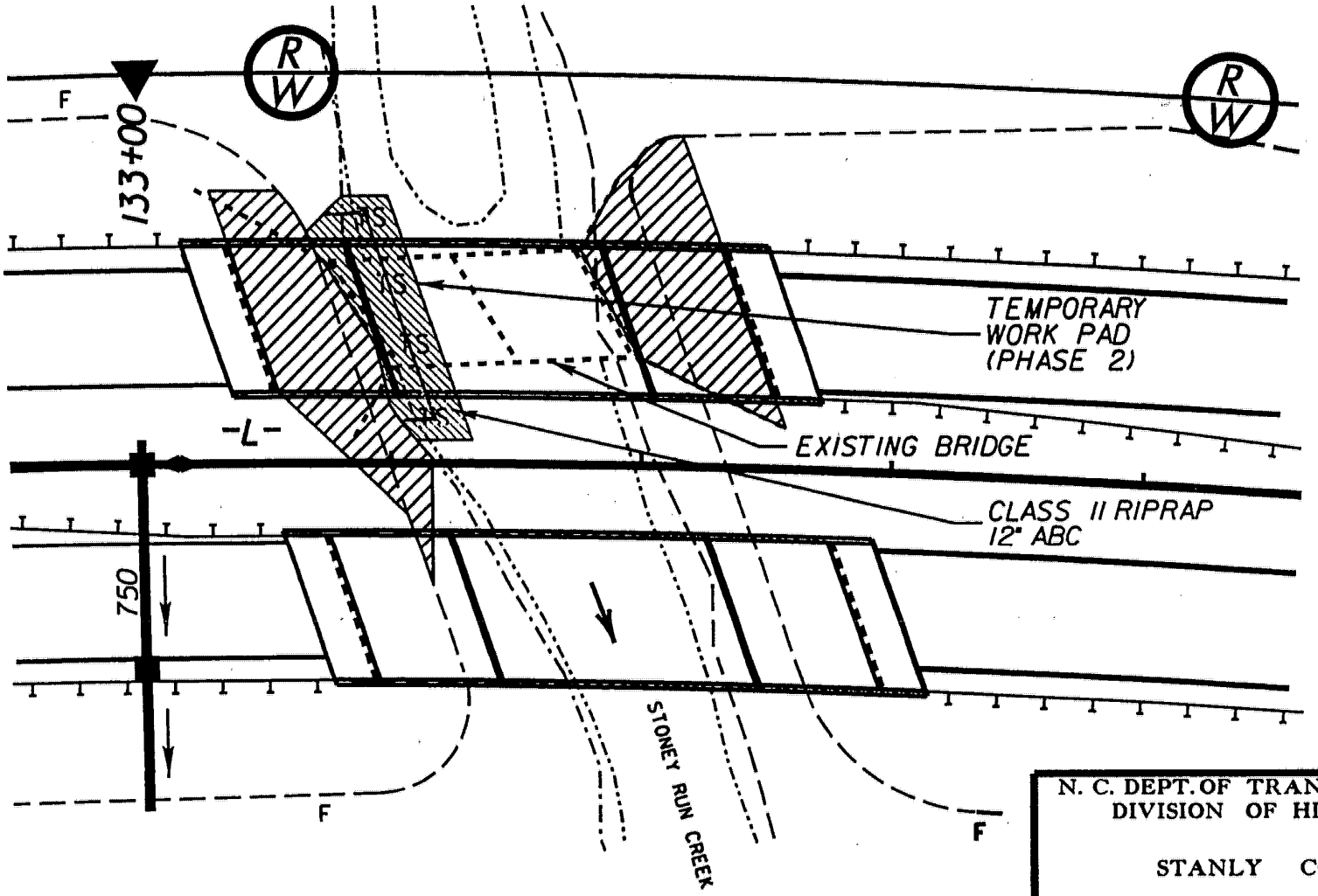
1m 0 2m VERTICAL SCALE

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

STANLY COUNTY

PROJECT: 6.689002T (R-967CB)
NC 24-27 FROM EAST OF ISLAND CREEK IN LOCUST TO EAST OF BIG BEAR CREEK NEAR SR 1253 (SAM ROAD)

Sheet 13 of 21



PLAN VIEW

SITE 12

DENOTES MATERIAL TO BE EXCAVATED

TS TS DENOTES TEMPORARY FILL IN SURFACE WATER

5m 0 10m

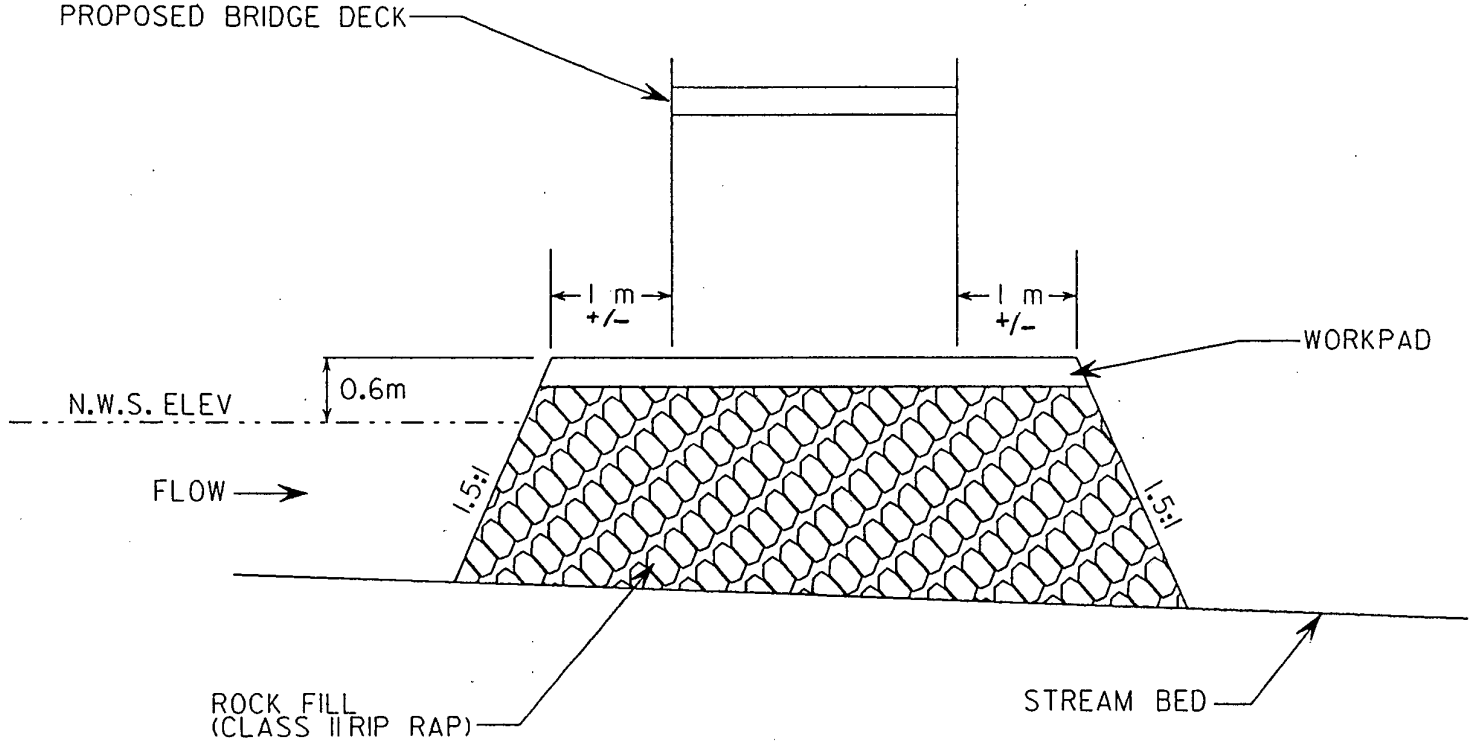
N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

STANLY COUNTY

PROJECT: 6.689002T (R-967CB)
NC 24-27 FROM EAST OF ISLAND CREEK IN LOCUST TO EAST OF BIG BEAR CREEK NEAR SR 1253 (SAM ROAD)

Sheet 12 of 21

WORK PAD DETAIL
(NOT TO SCALE)



QUANTITY ESTIMATES

VOLUME OF CLASS II RIP RAP= 540 cy (410 m^3)

AREA OF CLASS II RIP RAP= 0.04 ha

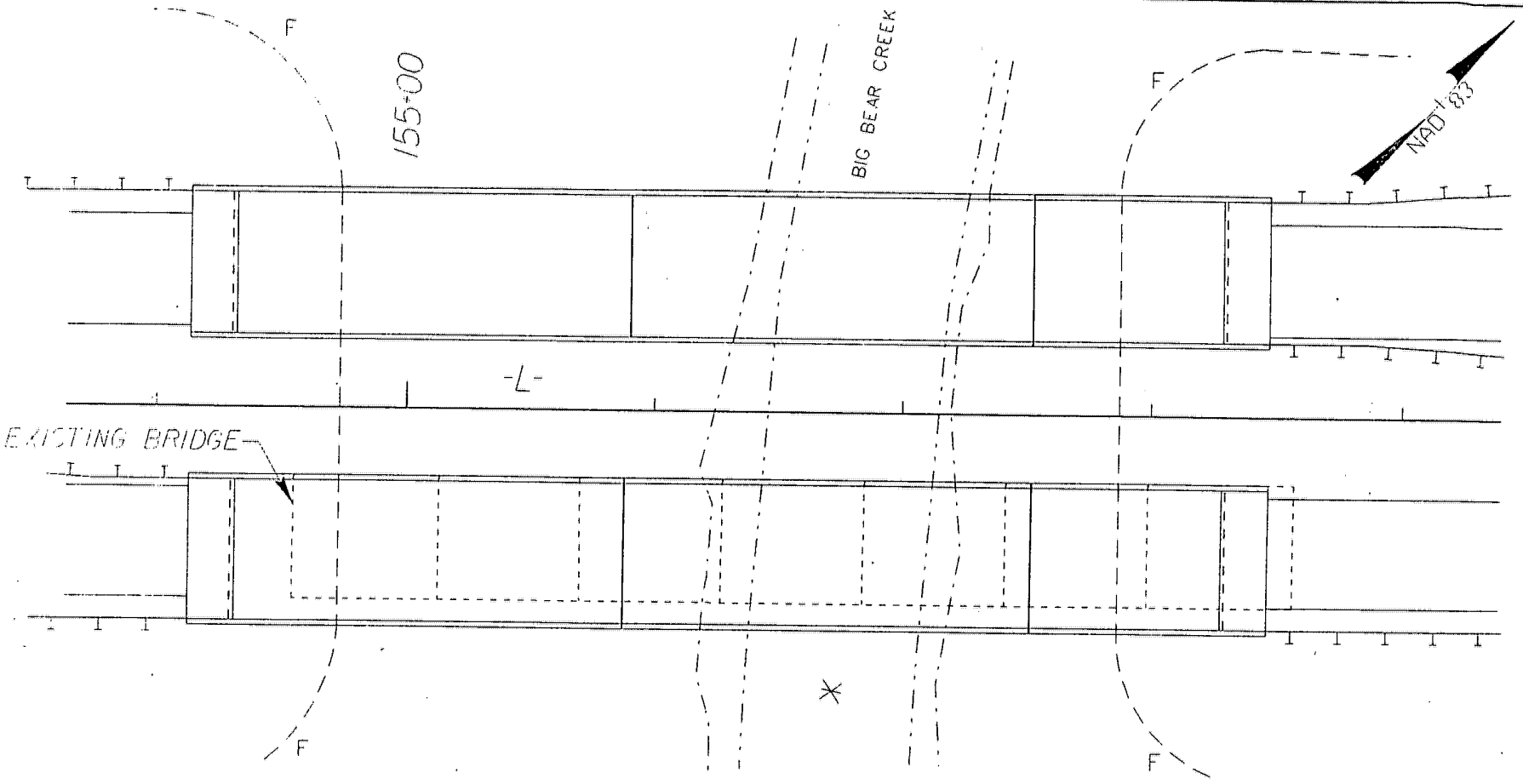
Estimate 720 mTons Class II Rip Rap

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

STANLY COUNTY
PROJECT: 6.689002T (R-967CB)

NC 24-27 FROM EAST OF ISLAND CREEK IN LOCUST TO EAST OF BIG BEAR CREEK NEAR SR 1253 (SAM ROAD)

SHEET 14 OF 21



PLAN VIEW
SITE 13

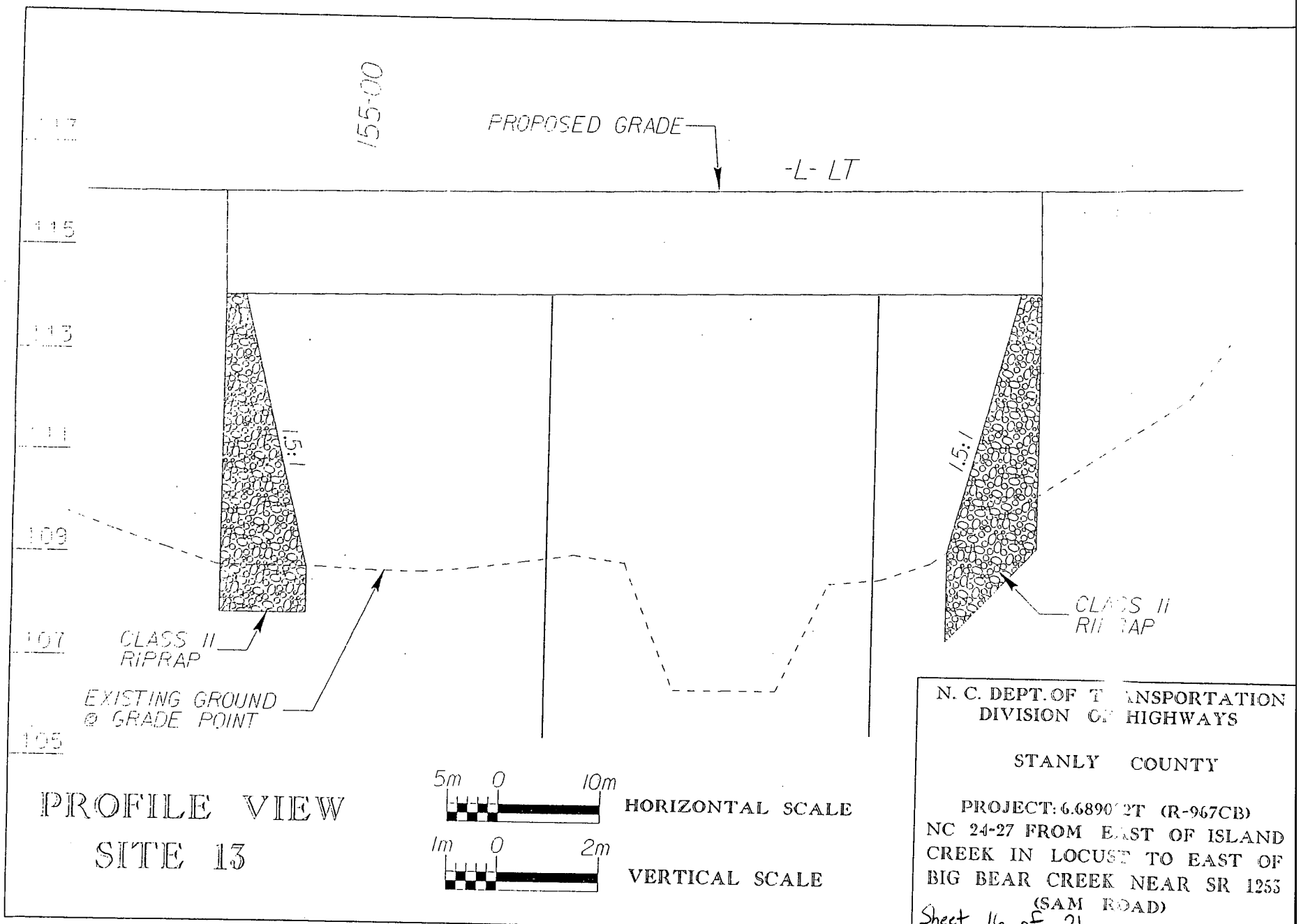
5m 0 10m

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

STANLY COUNTY

PROJECT: 6.689002T (R-967CB)
NC 24-27 FROM EAST OF ISLAND CREEK IN LOCUST TO EAST OF BIG BEAR CREEK NEAR SR 1253 (SAM ROAD)

Sheet 15 of 21



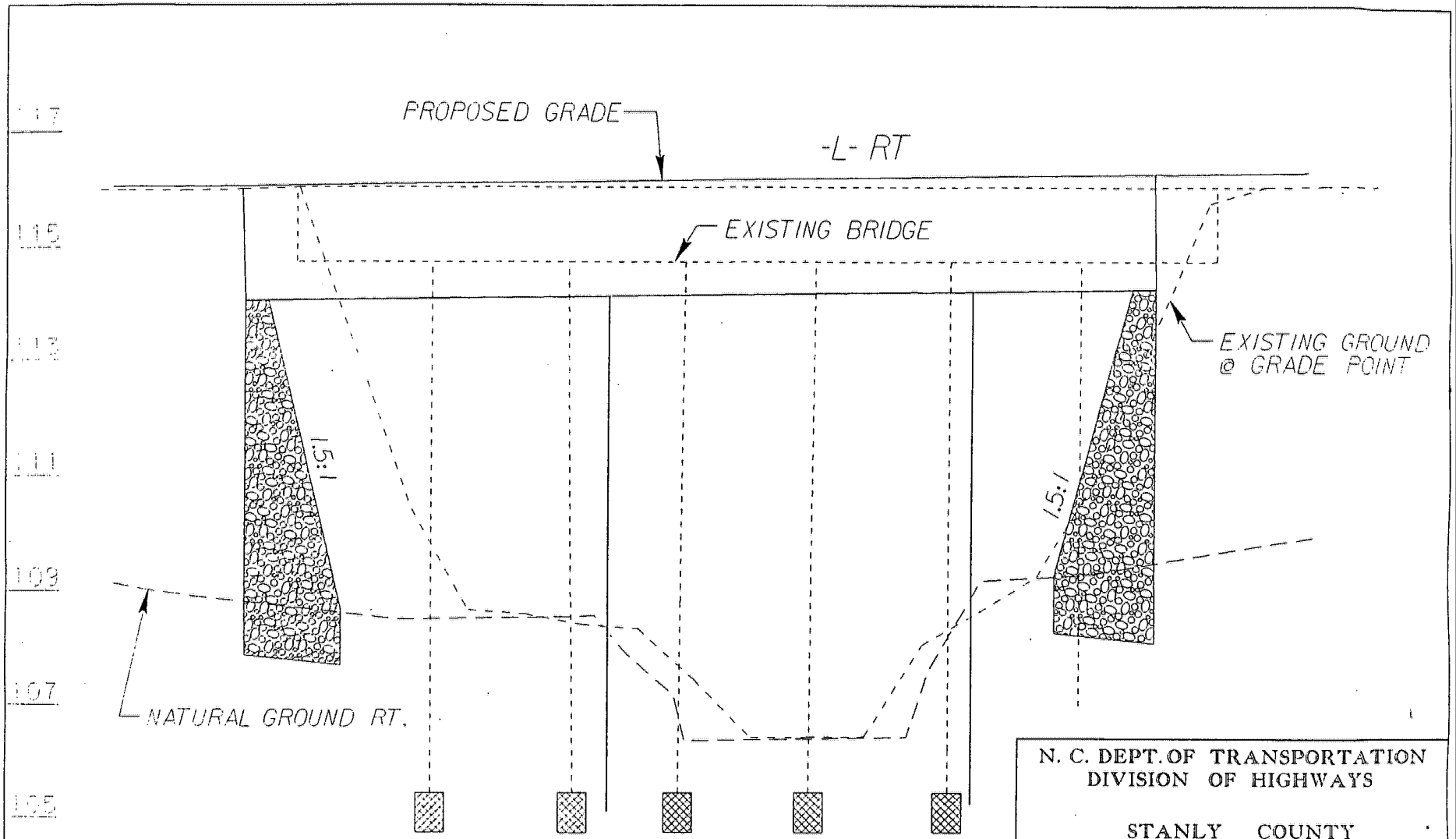
PROFILE VIEW
SITE 13

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

STANLY COUNTY

PROJECT: 6.689012T (R-967CB)
NC 24-27 FROM EAST OF ISLAND CREEK IN LOCUST TO EAST OF BIG BEAR CREEK NEAR SR 1253 (SAM ROAD)

Sheet 16 of 21



PROFILE VIEW
SITE 13

5m 0 10m HORIZONTAL SCALE

1m 0 2m VERTICAL SCALE

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

STANLY COUNTY

PROJECT: 6.689002T (R-967CB)
NC 24-27 FROM EAST OF ISLAND CREEK IN LOCUST TO EAST OF BIG BEAR CREEK NEAR SR 1253 (SAM ROAD)

Sheet 17 of 21

IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size	WETLAND IMPACTS				SURFACE WATER IMPACTS					BUFFER IMPACTS	
			Fill In Wetlands (ha)	Temp. Fill In Wetlands (ha)	Excavation In Wetlands (ha)	Mechanized Clearing (Method III) (ha)	Fill In SW (Natural) (ha)	Fill In SW (Pond) (ha)	Temp. Fill In SW (ha)	Existing Channel Impacted (m)	Relocated Channel (m)	Zone 1 (ha)	Zone 2 (ha)
1	72+00	600					0.005			66			
3	85+00 RT	1350					0.004			27			
5	100+40 LT	1 @ 1200, 1 @ 1500				0.003	0.005			27			
7	111+00	1050					0.001			30			
9	118+34 to 118+74	1200 2.4x2.1 RCBC					0.013			98			
11	145+60	900	0.05			0.01	0.001			15			
12	133+29	@10,1@20,1@10 BRIDGE							0.01				
13	155+26	@32,1@32,1@16 BRIDGE							0				
TOTALS:			0.05	0	0	0.013	0.029	0	0.01	263		0	0

original site 8 has been combined into site 9

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

STANLY COUNTY

PROJEC 6.689002T (R-967CB)
NC 24-27 FROM EAST OF ISLAND CREEK IN LOCUST TO EAST OF BIG BEAR CREEK NEAR SR 1253 (SAM ROAD)

10/3/02

PROPERTY OWNER

NAME AND ADDRESS

PARCEL NO.	OWNER'S NAME & ADDRESS
(17)	David L. Mullis & wf. Nancy H. P.O. Box 447 Stanfield, N.C. 28163
(18)	David L. Mullis & wf. Nancy H. P.O. Box 447 Stanfield, N.C. 28163
(19)	Joyce B. & Franklin D. Hensley P.O. Box 274 Locust, N.C. 28097
(30)	Lillian B. Love 12640 N.C. 24-27 Highway Stanfield, N.C. 28163
(31)	Ronald T. & wf. Nancy L. Eudy 12611 N.C. 24-27 Highway Stanfield, N.C. 28163
(32)	M. D. Brattian (Heirs) 17668 Branton Road Stanfield, N.C. 28163
(38)	Robert D. Thompson & wf. Bobbie K. 12785 N.C. 24-27 Highway Oakboro, N.C. 28129
(39)	Richard M. Hatley & wf. Beverly B. 12847-B N.C. 24-27 Highway Oakboro, N.C. 28129
(40)	Stacy D. Thompson 12785 N.C. 24-27 Highway Oakboro, N.C. 28129
(41)	Cathy C. Hill 12882 N.C. 24-27 Highway Oakboro, N.C. 28129
(42)	County of Stanly ~~Box~~ 201 S. 2nd Street Albemarle, N.C. 28002

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

STANLY COUNTY

PROJECT: 6.689002T (R-967CB)
NC 24-27 FROM EAST OF ISLAND CREEK IN LOCUST TO EAST OF BIG BEAR CREEK NEAR SR 1253 (SAM ROAD)

SHEET 19 OF 21 9-27-00

PROPERTY OWNER

NAME AND ADDRESS

PARCEL NO.	OWNER'S NAME & ADDRESS
(43)	Roy L. Barbee & wf. Virginia 16042 N.C. 24-27 Highway Oakboro, N.C. 28129
(44)	Dillon E. Whitley 14170 McLester Road Oakboro, N.C. 28129
(64)	Velma R. Whitley 16343 N.C. 24-27 Highway Oakboro, N.C. 28129
(66)	James Edward Speight Jr. 204 East 1st. Street Oakboro, N.C. 28129
(67)	Donald W. Perry Sr. & wf. Patsy A. 20457 Running Creek Church Road Stanfield, N.C. 28163
(68)	Loudivine W. Eubanks 16418 N.C. 24-27 Highway Oakboro, N.C. 28129
(84)	West Stanly High School 16686 NC 24-27 Highway Oakboro, NC 28129
(85)	South Central Oil Co., Inc. 2121 West Main Street Albemarle, N.C. 28001
(89)	Ashley Heights Inc. P.O. Box 1289 Albemarle, N.C. 28002
(96)	Grimmer-Whitley Development Co., Inc. P.O. Box 898 Matthews, N.C. 28106
(111)	J. Clayton Burris 20258 N.C. 24-27 Highway Oakboro, N.C. 28129

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

STANLY COUNTY

PROJECT: 6.689002T (R-967CB)
NC 24-27 FROM EAST OF ISLAND CREEK IN LOCUST TO EAST OF BIG BEAR CREEK NEAR SR 1253 (SAM ROAD)

SHEET 20 OF 21 9-27-00

PROPERTY OWNER

NAME AND ADDRESS

PARCEL NO.	OWNER'S NAME & ADDRESS
112	Craig Burris & Heirs 20337 N.C. 24-27 Highway Oakboro, N.C. 28129
113	Nevin M. & Patricia Huneycutt 16422 McLester Road Oakboro, N.C. 28129
114	Jimmy H. Poplin 20321 N.C. 24-27 Highway Oakboro, N.C. 28129
147	J.T. Barbee & wife Louise 20777 N.C. 24-27 Highway Oakboro, N.C. 28129
148	David F. Morrow 608 Channing Circle Concord, N.C. 28027
149	Jeffrey L. & Pamela B. Hinson 210 South Main Street Oakboro, N.C. 28129
150	Sally Ann Nettleton 678 Ives Row Cheshire, CT. 06410
151	William C. Burris 20836 N.C. 24-27 Highway Oakboro, N.C. 28129

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

STANLY COUNTY

PROJECT: 6.689002T (R-967CB)
NC 24-27 FROM EAST OF ISLAND CREEK IN LOCUST TO EAST OF BIG BEAR CREEK NEAR SR 1253 (SAM ROAD)

SHEET 21 OF 21 9-27-00